

Chilton's **MOTOR AGE**

DECEMBER 1955

OCT. NOV. DEC.

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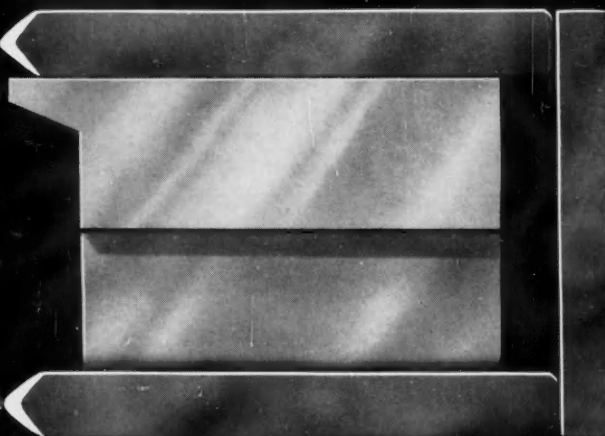


Christmas

HASTINGS *Beveled 2-C* OIL RING SEATS 3 TO 4 TIMES FASTER THAN OTHER CHROME RINGS!

BEVELED CHROME RAILS

make fineline contact with cylinder wall for a faster seat. Less area to wear-in means less time to break-in.



PATENT NOS. 2148997, 2170276, 2404862, 2436227, 2466474, 2614899, 2712971

Only Hastings gives you a chrome oil ring with patented, *beveled* rails—a chrome ring set that seats 3 to 4 times faster than conventional chrome!

These exclusive beveled rails make positive, fineline contact with any cylinder wall—tapered, out-of-round or re-bored. Oil control starts right now. And because Hastings is a *soft pressure* oil ring, you know it is gentle.

Beveled chrome oil rings are included in the Hastings 2-C Chrome Sets your jobber now has. With Hastings torsional designed, high-graphitic compression ring in the same "Motor Engineered" set, you get the fastest seating, best performing chrome combination there is!

Next ring job, install the *only* chrome rings that are beveled to seat fast, and stop oil-pumping from the start. Install Hastings 2-C Chrome Set—made by replacement specialists!

See the Difference!



BEVELED CHROME RAIL—the new fast-seating "fineline" design.



CONVENTIONAL CHROME RAIL—originated by Hastings...now replaced by *Beveled Chrome*.



HASTINGS MANUFACTURING COMPANY, HASTINGS, MICHIGAN • HASTINGS LTD., TORONTO
Piston Rings, Casite, Oil Filters, Spark Plugs, Wear Reducer

HASTINGS *Beveled Chrome-Vent* PISTON RINGS

Tough on oil-pumping . . . Gentle on cylinder walls

TRICKS OF THE TRADE *from* PERMATEX



Body Shop Work. Spread a bead of Form-A-Gasket No. 2 on edges when joining pieces of sheet metal. It will stop squeaks—stop rust, too.



Protect Marker and Signal Lights. Seal signal lights and all similar accessories cut into metal panels with Form-A-Gasket No. 1. It's a sure, easy way to keep them water- and weather-tight.

FORM-A-GASKET®

Universal Sealing Compounds
LEAKPROOF • PRESSURE-TIGHT

Check tips like these for new ways you can use Form-A-Gasket, best sealant going for leakproof, pressure-tight assemblies. Form-A-Gasket resists gasoline, water, hot or cold oil—many other liquids and gases. And it's specially made to withstand the pressures of high-compression engines.

Every Shop Needs All 3 Types



No. 1. Sets quickly
—dries hard



No. 2. Sets slowly
—remains pliable



No. 3. Brushable
liquid—remains tacky

Hundreds of uses around the house, too



Automatic Transmissions. Bothered by oil leaks here? Apply Form-A-Gasket No. 3 to both sides of torque converter gaskets and around other parts causing trouble. Makes a perfect, leakproof seal.

PERMATEX COMPANY, INC.

Brooklyn 35, N.Y. • Kansas City 15, Kans.

More than 50 Chemical Products for Better Automotive Maintenance

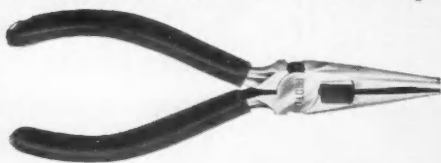
Hold Tight!

Get a better grip on your work
with **PROTO** professional-quality pliers



Try replaceable

Handeze Plier Grips



Give yourself more hand comfort with these colorful vinyl plastic plier grips! Three sizes fit most pliers. They slip on easily, fit tight, and are long-wearing. You can also buy many PROTO pliers already equipped with Handeze grips. See your dealer today!

Sensational
"Multi-plier"
multiplies your gripping
power 10 times!

There's no substitute for the *right* plier when you need it. And from PROTO's huge line, you can choose exactly the ones you'll need—standard types, slip-joint, midgets, side cutters, end nippers, and a host of special-purpose pliers. All are sturdily made of fine steels, and have a good "feel", powerful leverage, and comfort-

able, positive-grip handles. Buy the pliers you need from your PROTO dealer! Send 10¢ for catalog of entire line to

PLUMB TOOL COMPANY
2226Q Santa Fe Ave.
Los Angeles 54, Calif.

Eastern Factory, Jamestown, N.Y.
Canadian Factory, London, Ont.



Chilton's MOTOR AGE

WITH WHICH IS COMBINED AUTOMOBILE TRADE JOURNAL

Reg. U. S. Pat. Off.

For THE AUTOMOTIVE SERVICE INDUSTRY

LXXV, No. 1

December, 1955

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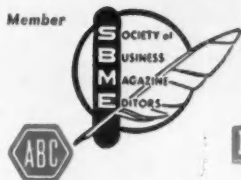
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TAKE THESE TIPS FROM WHEEL ALIGNMENT EXPERTS...

1 when checking coil springs, look for **COIL CLASH**

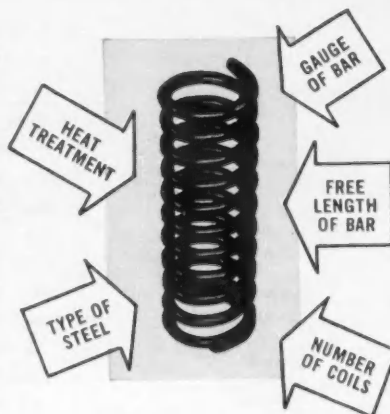
The experts look for shiny and worn places on coils where they have been rubbed together under pressure. This indicates "Coil Clash"... a sure sign that the coil spring needs replacement.



INSPECT FOR "COIL CLASH" every time you are under a car. Point out how worn coil springs affect safety and comfort—and your customers will appreciate your interest.

2 when replacing coil springs, insist on **MOOG**

The experts specify Moog Coil Springs because they are designed specially for the replacement market...with extra durability and "ride-ability" provided by a Built-in Overload Factor that protects overstressed suspension parts in older vehicles.



DESIGN DOES IT! The life of a spring, its ability to carry the car at the right height, and smoothness of ride depend on all these factors—each carefully controlled in Moog Coil Springs.



**GHQ for Chassis
and Suspension Parts**

MOOG INDUSTRIES, INC.

ST. LOUIS 14, MO.

"Highly satisfied with Commercial Credit Plan"

say **BERNARD L. COHEN** and **MORRIS BARON**,
partners in Baron Motors, successful Lincoln-Mercury dealer-
ship of Great Neck, New York.



"**W**E HAVE been operating over ten years and the services of COMMERCIAL CREDIT have helped us build a large agency. Our salesmen have found that stressing the many

features of their plan helps them close sales on the spot. COMMERCIAL CREDIT has always been willing to work with us in an effort to solve any situation."

COMMERCIAL CREDIT DEALERS ARE *Successful* DEALERS

A letter or call to your nearest COMMERCIAL CREDIT office will bring you prompt and expert help with your financing problems. Why not call today?



COMMERCIAL CREDIT CORPORATION

A service offered through subsidiaries of
Commercial Credit Company, Baltimore ...
Capital and Surplus over \$180,000,000
... offices in principal cities of the United
States and Canada.

Stockings up!

This is the way we thank you
for taking such very good care —
to use Factory Engineered innards
in the Buicks that you repair

We are stocking up to supply you
more completely than ever before —
with chassis, body and engine parts
and package repair kits galore

This way all concerned can be happy —
your Buicks, their owners, and you —
with low-cost high-quality service
and performance that feels "like new"

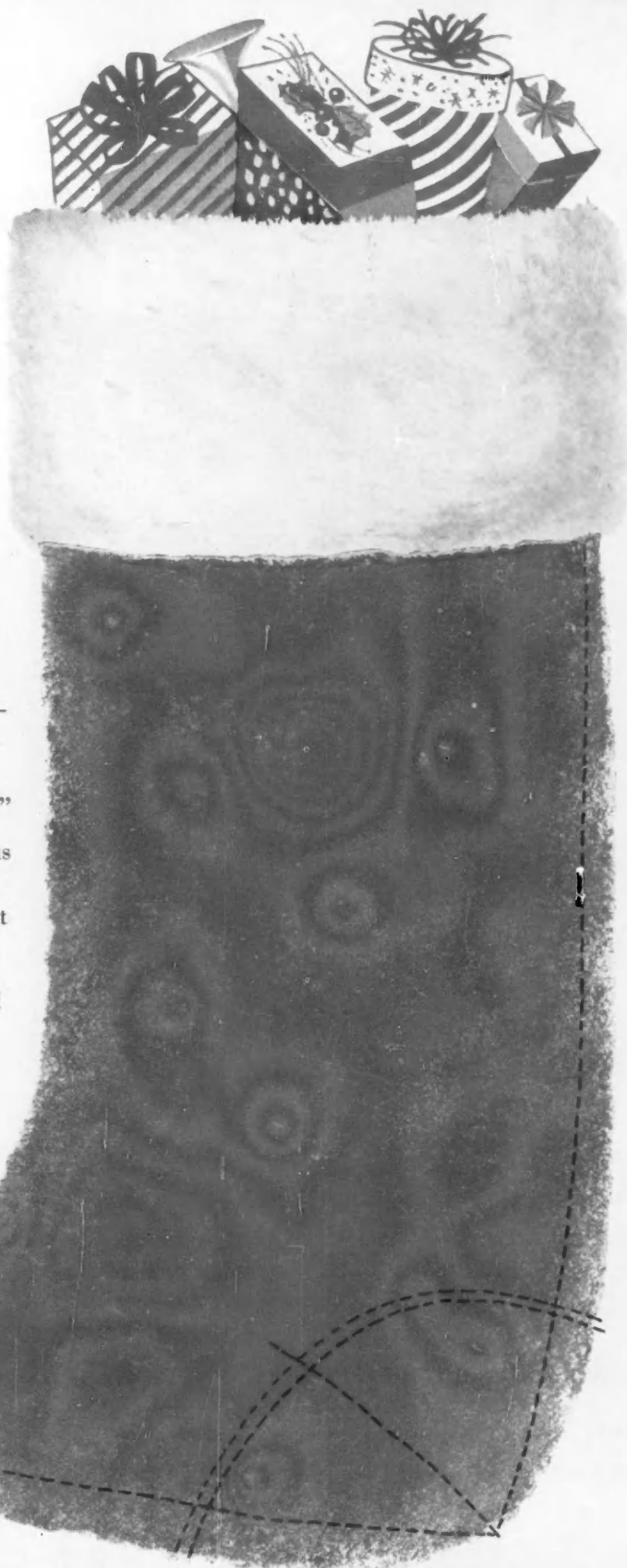
So feel welcome to come in, or call us
for whatever your Buicks require —
and be sure to take your full discount
from your Buick Dealer supplier.

Thanks again — and Happy Holidays!

*Your
Buick
Dealer*



Your One-Stop Source for Buick Parts





Quality Control

**PUTS THE WORLD'S BEST
BEARINGS IN YOUR HAND
WHEN YOU SPECIFY
FEDERAL-MOGUL**

108 TESTS ASSURE QUALITY

Some types of our bearings get as many as 108 different inspections. These include visual, mechanical and special inspections, including analyses and temperature controls. Others may require only half that many tests to assure top quality. But, regardless of the bearing or bearing part you need, you can be sure of this:

If it comes to you in the red-and-black Federal-Mogul box, it's tops in quality and accuracy for the job it has to do!

**You can depend on your
Federal-Mogul Jobber!**

FEDERAL-MOGUL SERVICE

Division of Federal-Mogul-Bower Bearings, Inc.
DETROIT 13, MICHIGAN



PROTECT

**YOUR CUSTOMERS
AND YOUR PROFITS—**



SELL *wix* TOP QUALITY OIL FILTER CARTRIDGES that Guard Engine Life!

WIX Engineered Filtration gives your customers top-quality engine protection . . . and WIX makes your sales easier with powerful national advertising, a complete Line of Oil Filter Cartridges for every car and Filters for cars not factory equipped—plus a complete Program with Sales Aids and Service Tools to boost your Cartridge and oil volume.

Get started toward more Cartridge sales and bigger profits. Call your WIX Jobber today!

wix

OIL FILTERS CARTRIDGES
AUTOMOTIVE • INDUSTRIAL • RAILROAD
WIX CORPORATION • GASTONIA • N. C.
In Canada: Wix Accessories Corp. Ltd., Toronto



TOOL KIT

Service even the hard-to-get-at filters on today's cars. This Filter Service TOOL KIT is available to you at a fraction of its cost.



FREE MANUAL

Contains illustrated instructions for servicing filters on all cars. Ask your Jobber's salesman for your FREE copy.



FILTERS

Complete, packaged Kits for each installation—WIX larger capacity Oil Filters engineered for long life and easier servicing.





"Pontiac Engineered Parts are as near as my telephone"

"A quick call to our local Pontiac dealer puts the parts I need in my hands . . . in a hurry! His tips on how to handle tough repair jobs save me a lot of time. Give your Pontiac dealer a call . . . he can be a big help to you, too!"



PONTIAC ENGINEERED PARTS ASSURE PONTIAC ENGINEERED PERFORMANCE



UMS HAS IT!

...EVERYTHING IT TAKES TO BUILD UP YOUR REPAIR BUSINESS

... and we mean *everything!* The strongest advertising program in the industry—the world's largest readymade market—individual merchandising campaigns that were planned by experts—and a lot more that you can read about on these pages. That isn't all though; there's still more that you can find out about from your United Motors Distributor. He'll explain the many and unique sales advantages that

servicemen enjoy when they handle world-famous General Motors products.

Take the time to compare all the help that UMS offers its dealers, with any other line in the business—and like thousands and thousands of other dealers you too will say, "Man, when it comes to sales assistance, UMS *really* has it!"—and more important, you profit by it.

Tune in ... ON TV ... Spectacular "Wide Wide World," NBC Network.

ON RADIO ... Lowell Thomas Newscast on the CBS Network. See your local listings for time and station.

WORLD'S LARGEST PRESOLD MARKET

As original equipment on nearly half of the cars on the road, the UMS lines have paved the way to a readymade market that is unparalleled in the automotive industry. All are "name" products that are known and respected for fine performance.

GREATEST MERCHANDISING PROGRAM IN THE INDUSTRY

It's the greatest not only because it includes so many sales aids, but because merchandising programs are worked out individually for each product, and are specifically planned and timed to hit with all possible force—assuring you of good results.

STRONGEST ADVERTISING SUPPORT EVER

A phenomenal advertising campaign, including 271 advertisements in leading magazines, has been designed to presell your customers. It's national in scope, but local in effect. People in your community, your block, will read these advertisements—and you will profit.

MODERN SERVICE SCHOOLS

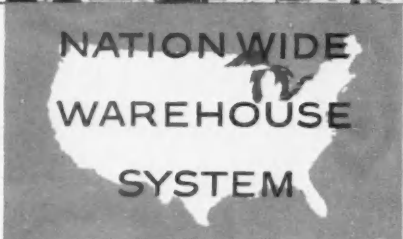
Facilities for free, expert instruction in the repair and maintenance of automotive equipment are available through United Motors at the General Motors Training Center nearest you.

COMPLETE CATALOG AND SERVICE INFORMATION

Quick, easy-to-use application and service information comes to you on all UMS lines, through the most complete and up-to-date catalog service in the industry.

NATIONWIDE AVAILABILITY

The right part, right there, right when you want it. That's what doing business with United Motors means. There are nearby United Motors Distributors, backed up by the huge inventories of a nationwide system of GM and UMS warehouses.



SEE YOUR UNITED MOTORS DISTRIBUTOR

GENERAL MOTORS PRODUCTS • UNITED MOTORS LINES



OVER 53,000,000
CARS' WORTH OF
EXPERIENCE
BEHIND THESE
UNITED MOTORS
LINES

ORIGINAL EQUIPMENT
CHASSIS AND ENGINE
PARTS FOR
BUICK • *Cadillac*
CHEVROLET • GMC
OLDSMOBILE • PONTIAC

PLUS-

DELCO BATTERIES
NEW DEPARTURE BALL BEARINGS
ROCHESTER CARBURETORS
DELCO BRAKE PARTS AND FLUID
HYATT ROLLER BEARINGS
MORaine GASOLINE FILTERS
HARRISON RADIATORS
AC GAUGES—SPEEDOMETERS
DELCO SHOCK ABSORBERS
Saginaw STEERING
DELCO AUTOMOTIVE MOTORS
HARRISON THERMOSTATS
INLITE BRAKE LININGS
Packard CABLE PRODUCTS
MORaine ENGINE BEARINGS
Guide LAMPS
DELCO ELECTRONIC PARTS
KLAXON HORNS
ROCHESTER LIGHTERS
Delco-Remy STARTING,
LIGHTING, IGNITION
GM HYDRA-MATIC
UNITS AND PARTS

and our 1956 engineering story is just as beautiful

THE styling beauty of these 1956 General Motors cars speaks for itself. And in words you GM dealers—and—of course, your customers are quick to appreciate.

But in your delight at the superlative way our GM designers have come through for you—with such sales-convincing advances as the 4-door hardtop—don't overlook the equally sales-clinching contributions of our GM engineers. After all—they pioneered automatic transmissions.

So 1956 GM automatic transmissions are bound to be the most advanced on the market. Their work in high-compression engine development is well-known. And the 1956 high-compression V8's in these cars make powerful sales points. The same goes for 1956 General Motors Safety Power Steering, Power Brakes, air conditioning.

Yes—in 1956 Styling—and in 1956 Engineering—General Motors leads the way to even greater sales for you!



1956 Chevrolet Bel Air 4-Door Sports Sedan



1956 Pontiac Star Chief 4-Door Catalina



1956 Oldsmobile Ninety-Eight DeLuxe Holiday Sedan



1956 Buick Roadmaster 4-Door Riviera

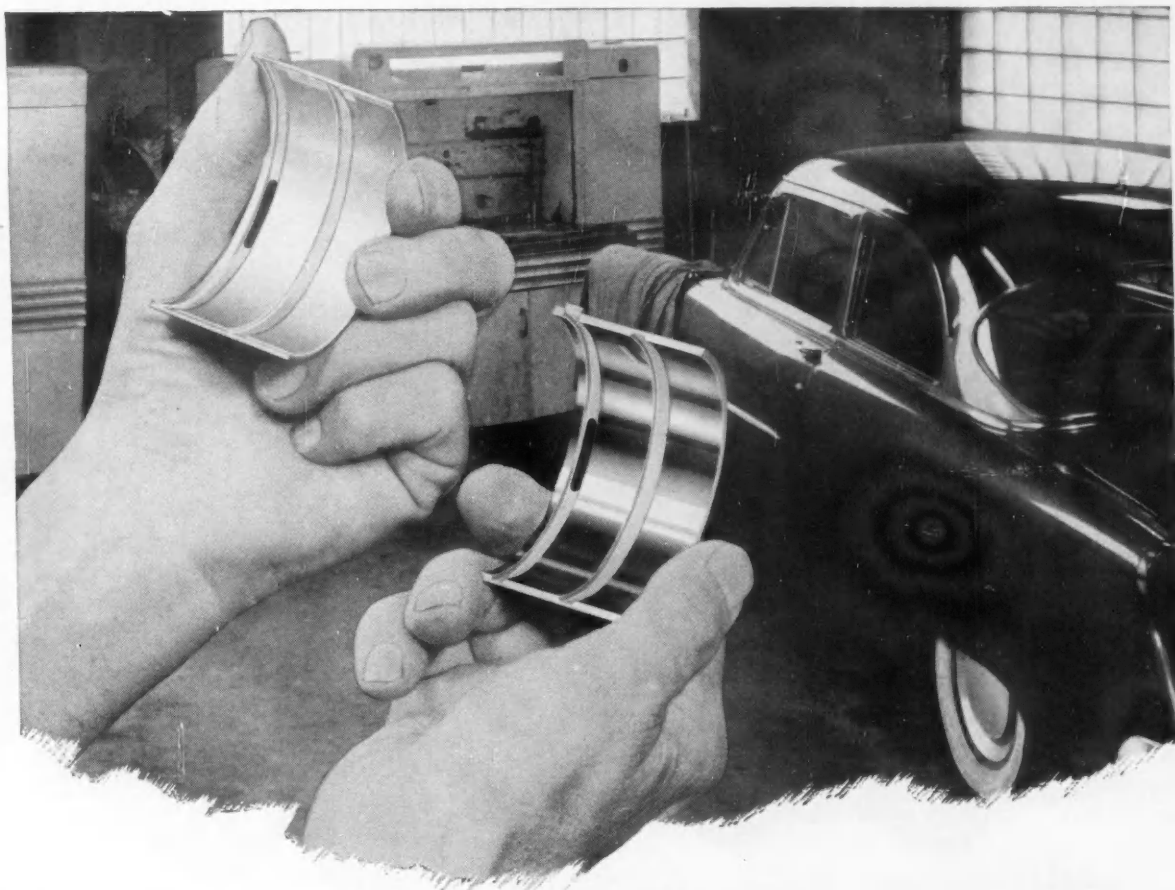


1956 Cadillac Sedan de Ville

GENERAL MOTORS

leads the way to even greater sales for you!

CHEVROLET • PONTIAC • OLDSMOBILE • BUICK • CADILLAC • *All with Body by Fisher* • GMC TRUCK & COACH



The bearings that make your job easier, more profitable ... CLEVITE* 77 and MICRO*

THESE are the Monmouth* bearings that have set new performance standards throughout the industry . . . bearings that are original equipment in more *kinds* of cars, trucks, busses, tractors, etc., than any other make.

So Monmouth replacement bearings are bound to go in with original equipment speed and precision

. . . and they're stocked for any and every job that comes into your shop. No confusion . . . no trouble . . . no wasted time . . . no comebacks! More profit!

It's so easy to get these and other pay-off advantages in modern replacement bearing service. Just call your nearby N.A.P.A. jobber. Ask for Monmouth.

*The words Monmouth, Clevite and Micro are registered trade marks of Clevite Corporation.

Monmouth

TRADE MARK

ENGINE BEARINGS

Clevite Service
The Cleveland Graphite Bronze Co.
Division of Clevite Corporation, Cleveland, Ohio, U. S. A.



*Your
NAPA Jobber
is a Good Man
to Know!*

MORE service sales



WHEN YOU'RE THE MAN WHO STOCKS AND SELLS...

CARTER **FUEL PUMPS**

Modern highway driving is tough on old-fashioned fuel pumps. But Carter Power Center Fuel Pumps are made for today's driving needs. Make your shop headquarters for rugged, dependable Carter Fuel Pumps.

You'll win a friend every time you make a sale.

Feature the fuel pump that's being used more and more by leading car and truck manufacturers. Call your Carter supplier for fast service.



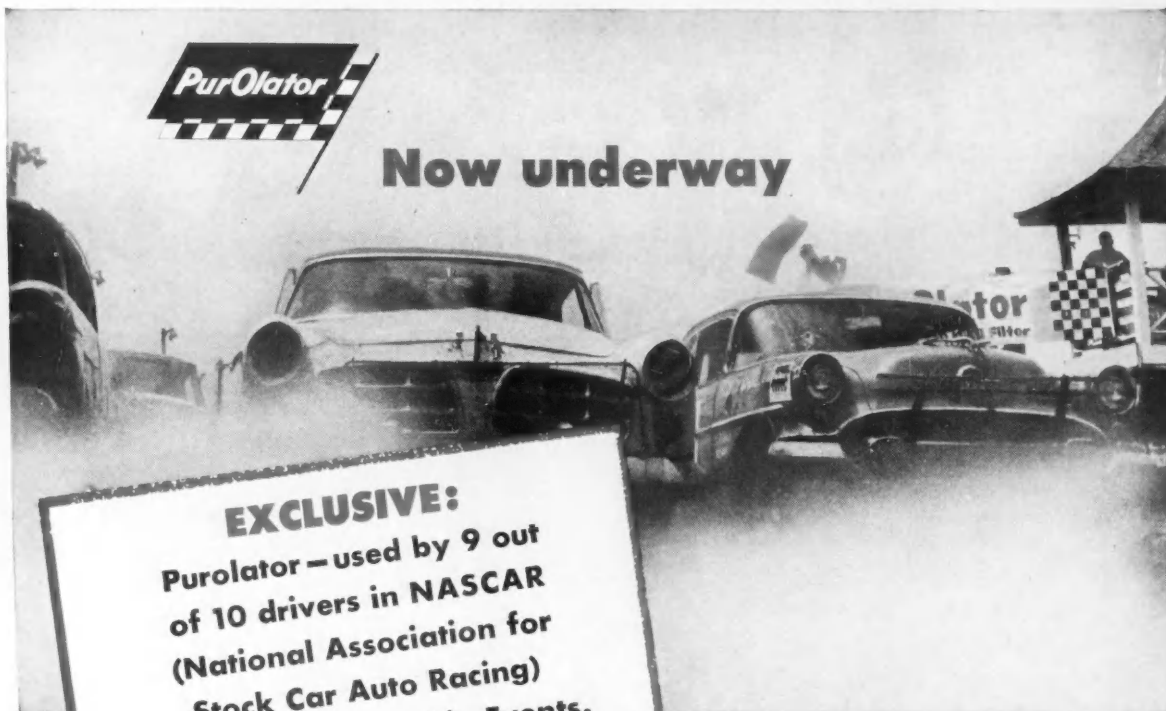
CARTER CARBURETOR CORPORATION

St. Louis 7, Missouri

Division of ACF INDUSTRIES, INCORPORATED



Now underway



EXCLUSIVE:
 Purolator—used by 9 out
 of 10 drivers in NASCAR
 (National Association for
 Stock Car Auto Racing)
 Grand Championship Events.

A great new Purolator Program

that S-P-E-L-L-S greater-than- ever Purolator Profits!

**Biggest, most convincing
 selling idea ever used
 to back the sale of oil filters!**

1. Every car in a NASCAR Event is a stock car . . . a car like yours . . . a car just like the cars your customers drive.
2. Every Purolator Filter used in cars in NASCAR Events is regular stock—the Purolator *all* dealers sell.
3. Every car owner knows the strain hour-after-hour high-speed NASCAR driving in biting dust and dirt puts on cars and equipment.
4. Now—thanks to Purolator's NASCAR tie-ups—every car owner will understand the tremendous superiority of Purolator Micronic Oil Filters . . . understand it in terms of his own car.

SELL MORE PUROLATORS—MORE OIL

Purolator is backing this powerful NASCAR proof of Purolator leadership with powerful human interest advertising in national magazines and newspapers . . . with exclusive on-the-spot merchandising and promotion.

Use this great selling idea to sell *more* Purolator Filters . . . *more* oil.

Remember: Purolator is first and finest . . . engineered to fit every car on the road. *Purolator meets every dealer's needs 100%.*

Remember: Every Purolator sold means the sale of an extra quart of oil . . . *extra profits for every dealer.*

Write, wire or phone for information.

"Purolator" and "Micronic," Reg. U. S. Pat. Off.

PUROLATOR PRODUCTS, INC., Rahway, New Jersey and Toronto, Ontario, Canada

Purolator

. . . America's No 1 OIL FILTER



The complete HEIN-WERNER line provides the right jack for every job!



Model E1.7F
Cap. 3000 lbs.
Low 7"



Model E3.9A
Cap. Tons 3
Low 9"



Model E5.9A
Cap. Tons 5
Low 9"



Model E8.9A
Cap. Tons 8
Low 9"



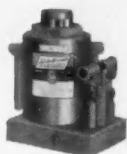
Model E12.9A
Cap. Tons 12
Low 9"



Model 20.10AA
Cap. Tons 20
Low 10"



Model 30.11AA
Cap. Tons 30
Low 11"



Model 50.12AA
Cap. Tons 50
Low 12"



Model 100.12AA
Cap. Tons 100
Low 12"



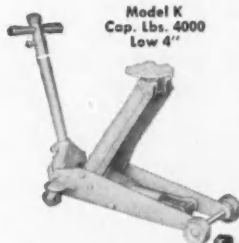
Model V-1.20
Cap. 3000 lbs.
Low 4 1/2" to 15 1/4"



Model O'BOY
Cap. 2500 lbs.
Low 4-5/16"



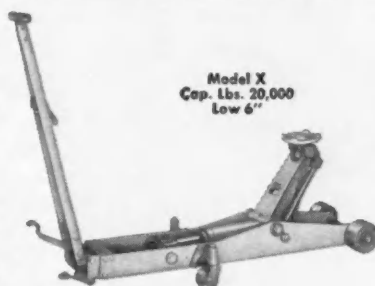
Model WS
Cap. Lbs. 3000
Low 4"



Model K
Cap. Lbs. 4000
Low 4"



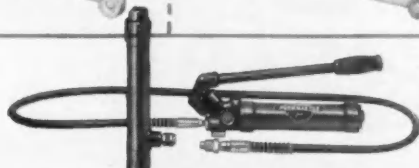
Model GG
Cap. Lbs. 8000
Low 4"



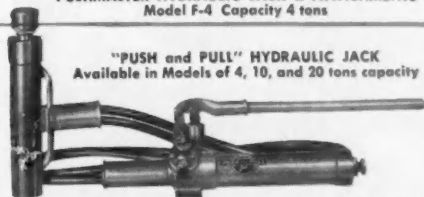
Model X
Cap. Lbs. 20,000
Low 6"



ADJ. STANDS
Model CS-2.12
Cap. 2 tons
Low 12"
CS-7.18
7 tons 18"



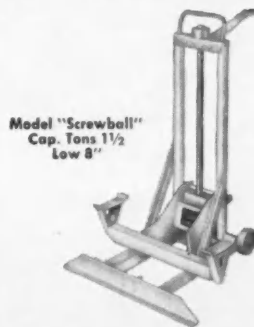
PUSHMASTER HYDRAULIC JACK & ATTACHMENTS
Model F-4 Capacity 4 tons



"PUSH and PULL" HYDRAULIC JACK
Available in Models of 4, 10, and 20 tons capacity



Model "55"
Cap. Tons 1 1/2
Low 8"



Model "Screwball"
Cap. Tons 1 1/2
Low 8"

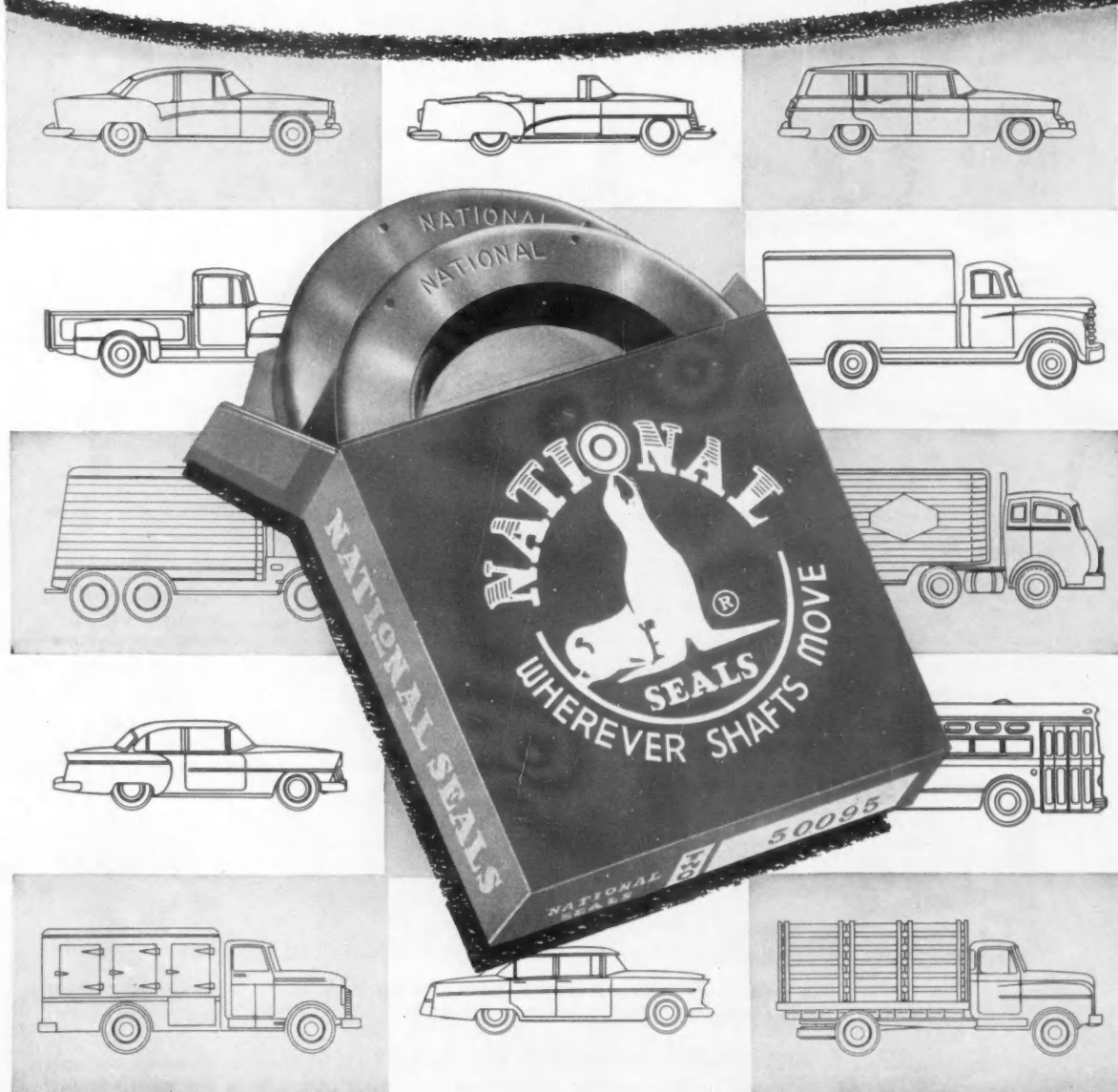
See your H-W jobber today or write us for details.

HEIN-WERNER CORPORATION, WAUKESHA, WISCONSIN

Hein-Werner
HYDRAULIC JACKS

HEIN-WERNER MANUFACTURES AND SELLS MORE HYDRAULIC JACKS THAN ANY OTHER COMPANY IN THE WORLD TODAY!

OIL SEALS CAR AND



FOR EVERY TRUCK!

Only your National Jobber has the big complete line

When you need oil seals, you need 'em now, and need 'em right. You go to the jobber who has complete stocks and gives you fast service.

Your National Oil Seal jobber has the right oil seals for 95% of all cars, including orphans. The same goes for trucks, buses, tractors, and trailers. Only National has the big complete line, because only National makes all these seals for original equipment. And since National seals are approved original equipment, you're

sure National seals are exact replacement.

(If you suddenly need a really odd-ball seal which your jobber doesn't stock, he orders it from National's convenient nation-wide warehouses. Delivery is practically overnight—not next month!)

For seals, for other key parts you need, patronize your National Oil Seal jobber. He's the man who's got the big complete line, and gives you top service to boot!

It's easiest to keep popular seals on hand in a National Oil Seal service stock. Exclusive feature of National cabinets lets you find the right seals fast, and warns when stocks of any given number are low. Your jobber keeps the stock up. Two stocks: big one contains front and rear wheel seals for popular cars; smaller stock (ideal for lube stations) contains front wheel seals only. Catalog, price sheet, steel enameled cabinet supplied.



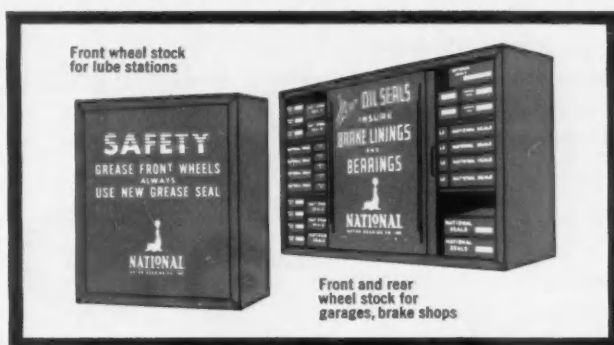
Support this industry-wide program



NATIONAL MOTOR BEARING CO., INC.

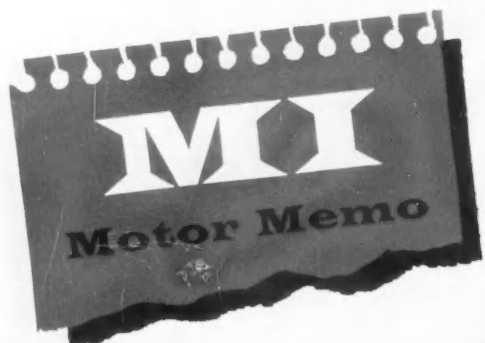
General Offices: Redwood City, California
Plants: Redwood City, California and Van Wert, Ohio

"Always install a new National Oil Seal every time an old seal is removed!"



NATIONAL
OIL & GREASE SEALS
O-RINGS SHIMS

Approved original equipment for all cars, trucks, buses and tractors



TEXACO "MARFAK"
*is advertised
 regularly in*
**MECHANIX
 ILLUSTRATED**
because—

With every issue, MI provides an audience of more than a million motor-minded, brand-conscious men . . . men whose extreme interest in all things automotive makes them ideal prospects for the full line of fine Texas Company products.

More than 93% of MI readers own one or more cars—and buy only brands they know deliver greater car performance and results. It's this insistence on superior, top-quality products that makes Texaco a popular, always-in-demand favorite with MI readers everywhere.



**MECHANIX
 ILLUSTRATED**

A FAWCETT PUBLICATION

The favorite magazine of motor-minded men

67 West 44th Street • New York 36, N. Y.

**CAR-OWNERS ARE
 TURNING TO TEXACO**



Hard-hitting advertisements in
 MECHANIX ILLUSTRATED and other leading
 national magazines pre-sell
 Texaco products to millions
 of car owners






all **3** engineered
for longer valve life
PERMITE
original equipment **VALVES**



**STELLITE
VALVE**



**BI-METAL
VALVE**
... with Nitrogen
added

**ROTO-
MECHANISM
(Free Valve)**



**SODIUM
COOLED
VALVE**

For every type of service there is a **RIGHT** Permite Valve
engineered for top performance and long life.

Many of America's leading car and truck
manufacturers use Permite Valves as original equipment.

Service men build customer confidence by installing
Permite Valves and other Permite Original
Equipment Engine and Chassis Parts.

*There is a
Permite Distributor
near you.*

**ALUMNUM INDUSTRIES, INC.
CINCINNATI 11, OHIO**



original equipment

Permite parts
the complete motor and chassis line

Out of Moraine Products comes a NEW and SAFER BRAKE FLUID- DELCO SUPER 11 improved with HTD

Original equipment on 1956 General Motors cars!

In the brake systems of 1956 General Motors cars and trucks, new Delco Super 11 brake fluid improved with HTD gives *improved braking* at all temperatures, under all conditions. Chemically stable, compatible with the rubber and metal parts of the brake system, Delco Super 11 improved with HTD is efficient

at 50° higher temperatures. In addition, it has greater resistance to corrosion and evaporation, exceeds SAE and government specifications for heavy-duty hydraulic brake fluid.

Sell your customers this great new fluid for that extra margin of safety. *Nationally advertised* to bring you more

business—motorists will know about it and ask for it.

Packaged in convenient quantities, from pint cans to 54-gallon drums. Order from your United Motors distributor or your General Motors car or truck dealer.



A GENERAL MOTORS PRODUCT—A UNITED MOTORS LINE
DISTRIBUTED BY WHOLESALERS EVERYWHERE



Delco Lined Brake Shoes

Are made and assembled to original equipment specifications. Best for replacement.



Master Cylinder Repair Kit

All the parts needed to put a master cylinder and a wheel cylinder back in normal operating condition.



Wheel Cylinder Repair Kit



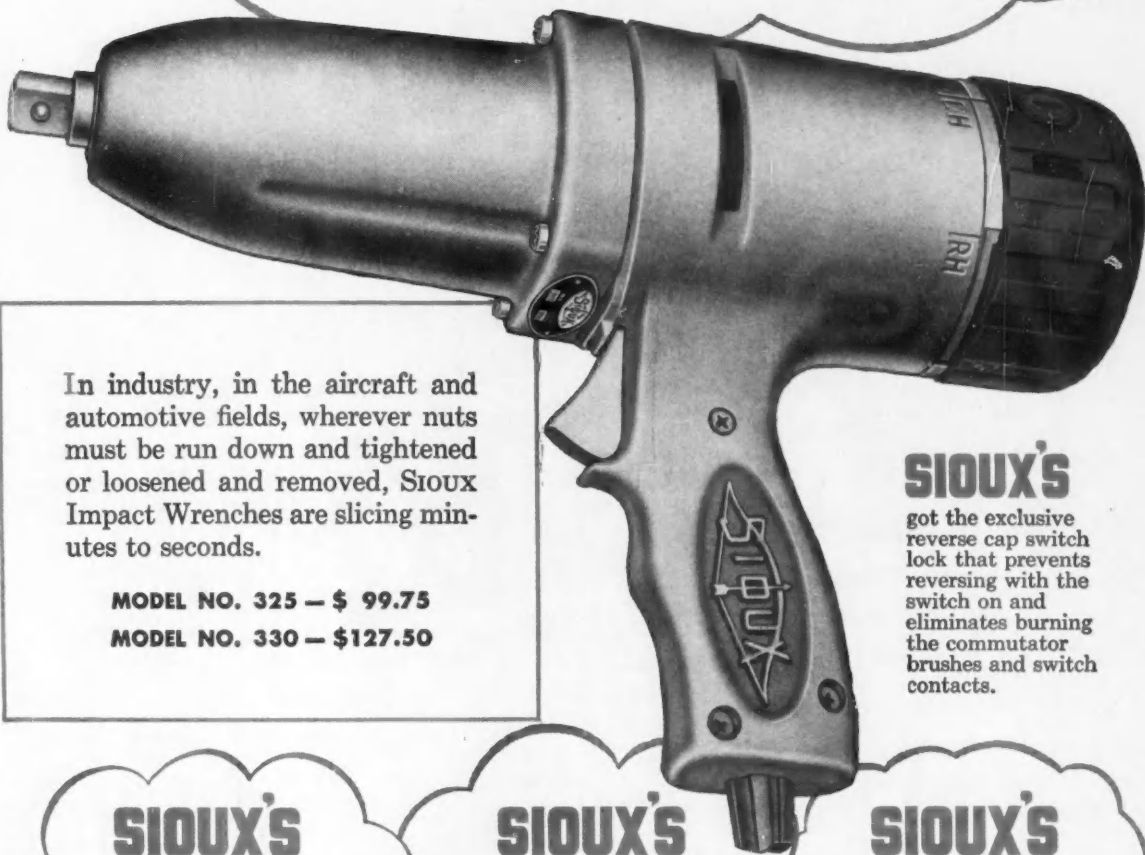
Another General Motors Value

Moraine Products

Division of General Motors, Dayton, Ohio



They're really going for this new **SIoux** **IMPACT WRENCH**



In industry, in the aircraft and automotive fields, wherever nuts must be run down and tightened or loosened and removed, Sioux Impact Wrenches are slicing minutes to seconds.

MODEL NO. 325 — \$ 99.75

MODEL NO. 330 — \$127.50

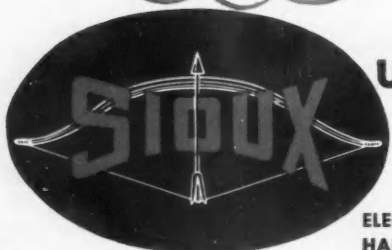
SIoux's

got the exclusive reverse cap switch lock that prevents reversing with the switch on and eliminates burning the commutator brushes and switch contacts.

**SIoux's
GOT THE
POWER!**

**SIoux's
GOT THE
DEPENDABILITY!**

**SIoux's
GOT THE
PRICE!**



USE SIoux ALL THE WAY THROUGH
STANDARD THE WORLD OVER...

ALBERTSON & CO., INC.

SIoux CITY, IOWA, U.S.A.

ELECTRIC IMPACT WRENCHES • GRINDERS • FLEXIBLE SHAFTS • POLISHERS • DRILLS
HAND SAWS • SANDERS • VALVE FACE GRINDING MACHINES • ABRASIVE DISCS

A HYDRAULIC LIFT FOR YOUR PROFITS

PROFITS



"NO-LASH"

HYDRAULIC
VALVE
LIFTERS

Every year the proportion of new cars coming off the lines with hydraulic valve lifters is increasing. It is estimated that there are 112,000,000 hydraulic valve lifters in operation in some 8,000,000 cars. Naturally that means the replacement service business is growing in importance.

It's easy to get set to handle this profitable service business. The "NO-LASH" line, GM-engineered and used as original equipment, covers practically the entire range of installations. Get into this plus-profit phase of modern service with "NO-LASH" Hydraulic Valve Lifters.

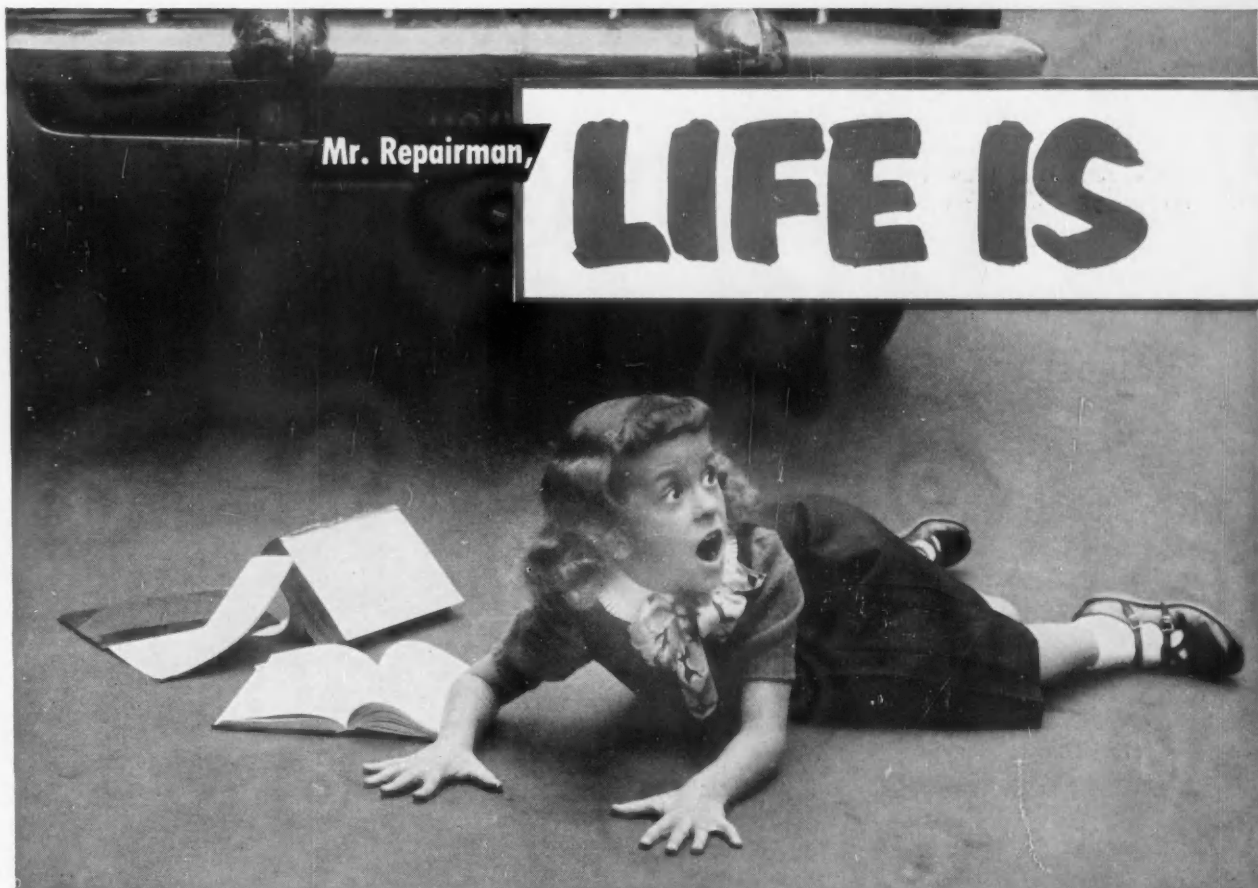
AVAILABLE PROMPTLY FROM YOUR REGULAR AC SUPPLIER

DISTRIBUTED BY AC SPARK PLUG DIVISION, FLINT, MICHIGAN
MANUFACTURED BY DIESEL EQUIPMENT DIVISION, GENERAL MOTORS CORPORATION



Mr. Repairman,

LIFE IS



Every 3 minutes some youngster under 15 years of age is killed or injured in a traffic accident on American roads.

You can cut down this toll by using quality-proven Wagner Lockheed Brake Products for repair and replacement needs.

**Safe brake products are quickly available—
and ALL from one source...your Wagner jobber**



WAGNER SHOE EXCHANGE SETS. Available with "bonded-on" or "riveted-on" Wagner CoMaX Brake Lining, with both standard and over-size lining thicknesses, for all popular cars and light trucks.



WAGNER CoMaX BRAKE LINING. Unsurpassed for quick, safe, smooth stops, and extra long service life. Available in sets, rolls, blocks, slabs, cut segments, and shoe exchange sets.



WAGNER LOCKHEED HYDRAULIC BRAKE PARTS. These replacement parts are manufactured to the same specifications as parts used in complete assemblies for original equipment.

You can depend upon WAGNER QUALITY because Wagner Products are used as original equipment by automobile, truck, tractor and trailer manufacturers.

H55-8

Est.
1891

Wagner

*...the best known
name in brake service*

LOCKHEED-HYDRAULIC BRAKE PARTS and FLUID... NoRol... CoMaX BRAKE LINING... AIR BRAKES... TACHOGRAPHS... ELECTRIC MOTORS

PRICELESS!

SAFE BRAKES SAVE LIVES

...and YOUR choice of the brand of brake fluid could be the difference between accidents and safe stops

for safety's sake...use genuine

WAGNER[®] LOCKHEED BRAKE FLUID

There's none finer...none safer. Surpasses S.A.E. specifications

Don't turn a customer's routine stop into a heart-chilling tragedy by gambling on "bargain-priced" inferior quality brake fluid. Such fluids could quickly deteriorate a brake system... cause brakes to fail without warning.

Play safe! Use safety-proven Wagner Lockheed... America's No. 1 Brake Fluid! It functions perfectly in all seasons and under all driving conditions. Thoroughly lubricates the system, mixes with all approved fluids, and does not evaporate rapidly. It protects the brake system against dangerous vapor locks, freeze-ups, gummy residue deposits, corrosion of metal parts or swelling of rubber parts. Only two types required to cover all service needs... No. 21 (regular) and No. 21-B (Heavy-Duty).



**BOOST YOUR PROFITS BY BECOMING A
WAGNER FRANCHISED DEALER**

Wagner Electric Corporation
6498 PLYMOUTH AVE., ST. LOUIS 14, MO., U.S.A.
(Branches in principal cities in U.S. and in Canada)

Fill out and mail coupon for full facts on this profitable program that's sweeping the country. No obligation.

NAME _____

FIRM NAME _____

ADDRESS _____

CITY _____

ZONE _____ STATE _____

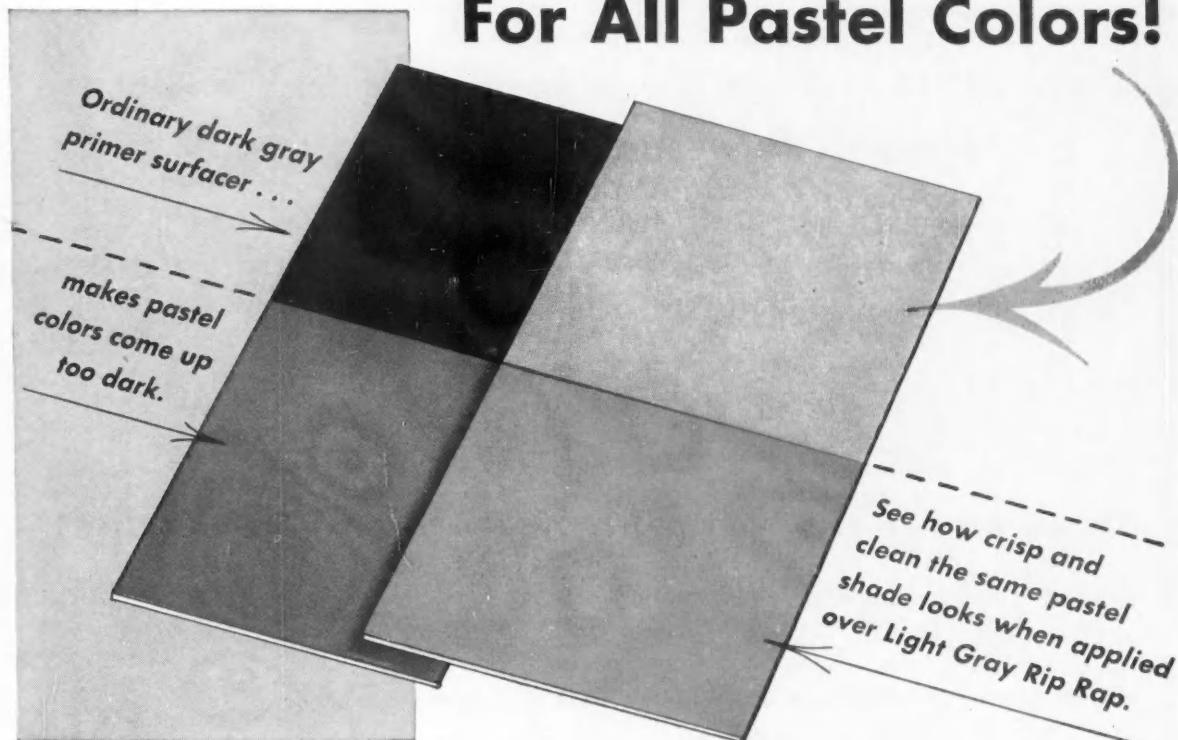


TRANSFORMERS... INDUSTRIAL BRAKES

DITZLER'S DZL 3355

Gives You More Accurate Matches

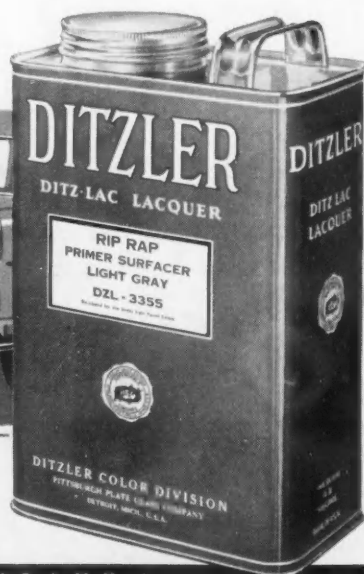
For All Pastel Colors!



DITZLER'S new Light Gray Rip Rap—DZL 3355—is a real necessity in every paint shop today. This new primer surfacer gives you more accurate matches—brings out the true color of the popular pastel colors on today's motorcars.

- **The high solid content** of this new Light Gray Rip Rap gives more film-forming materials. Fewer coats are needed. It feathers out without splitting or chipping at the edges. The very fine pigments it contains require less sanding. You also get excellent holdout that improves the looks of both lacquer and enamel colors.

- **With Light Gray Rip Rap** you save labor and material—and your customers get better looking jobs.



Ditzler Color Division, Pittsburgh Plate Glass Company, Detroit 4, Michigan.



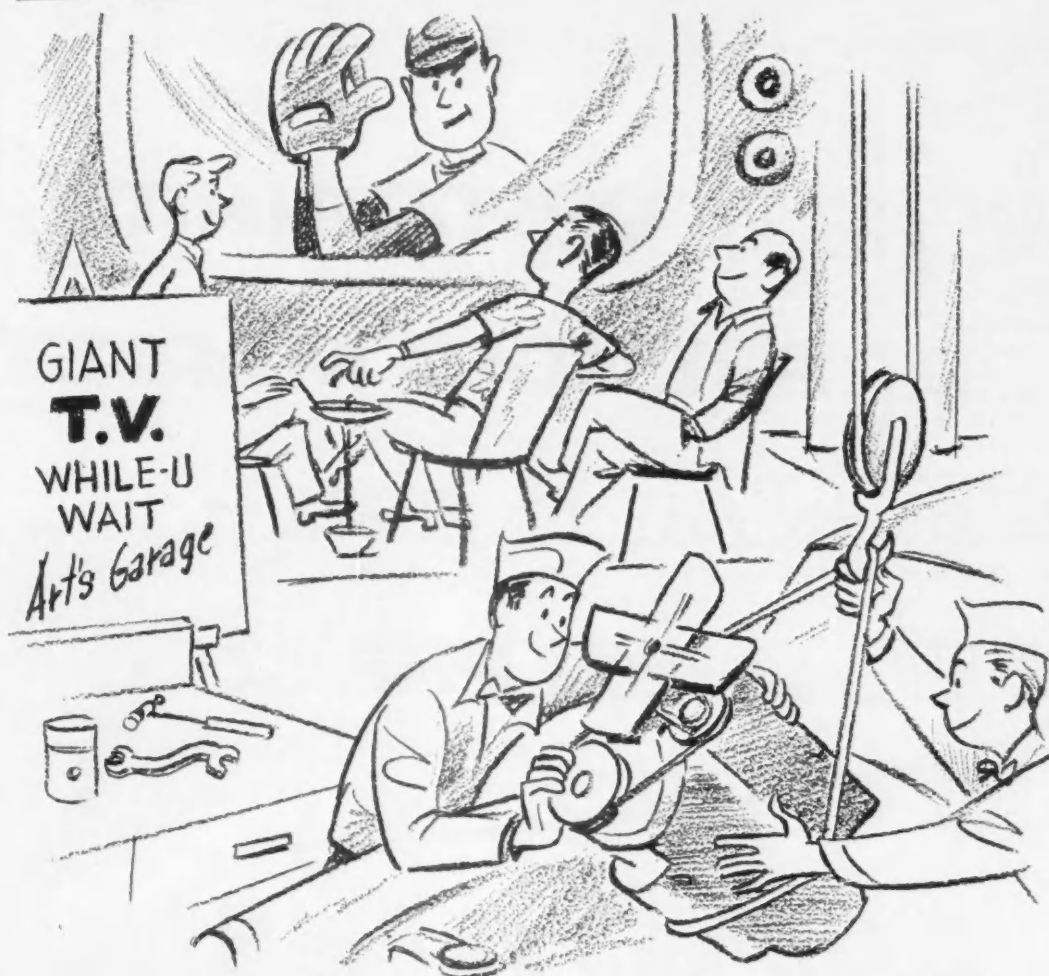
DITZLER

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

What makes customers come back for more?



They'll all come back if you give 'em the best. When it's a bearing job... *just tell 'em it's TIMKEN!*

Lots of customers might be attracted to a garage that offered free movie-size TV. But, who can afford a screen this large or depend on it to keep customers coming? The best way to get steady customers is to offer them top service. To do this, show them that you use the finest replacement parts. When it comes to bearings, that means Timken®

tapered roller bearings. It's the *one* name your customers know means quality. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable: "TIMROSCO".

TIMKEN
TRADE MARK REG. U. S. PAT. OFF.
TAPERED ROLLER BEARINGS

NOT JUST A BALL ● NOT JUST A ROLLER □ THE TIMKEN TAPERED ROLLER, □ BEARING TAKES RADIAL AND THRUST —□— LOADS OR ANY COMBINATION ☼



Why pass up **OPPORTUNITY**?

The **PRE-SOLD MARKET**
is the easiest to **SELL**—
and the market's **PRE-SOLD** on



MORaine

ENGINE BEARINGS

A GENERAL MOTORS PRODUCT   A UNITED MOTORS LINE
DISTRIBUTED BY WHOLESALERS EVERYWHERE

Note the cars and trucks that pass your door. Almost half of them were built with Moraine engine bearings as original equipment. It's a replacement market with great opportunity.

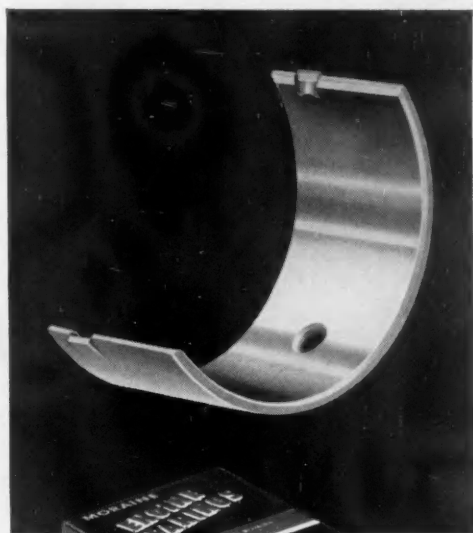
Original equipment requirements are highly exacting—and the fact that Moraine engine bearings meet these requirements is your assurance that Moraine bearings are best for replacement as well.

A leader in the Moraine line of original equipment engine bearings is the exclusive M-100 (Durex)—designed to give greater durability and longer life through an exclusive Moraine engineering process.

The M-100 and superior bi-metal bearings are two big reasons why so many of America's cars are factory-equipped with Moraine bearings—including all General Motors cars and trucks. And why, in turn, the replacement market for Moraine bearings is truly enormous!

For 1955, Moraine offers a complete line of bearings for all cars, available everywhere through United Motors distributors. To boost your sales, start taking advantage of the ready-made Moraine replacement market now.

Important bearing news! Moraine-400—toughest automotive bearing ever made—is original equipment in 1955 models of representative cars, trucks, buses and off-the-road vehicles.



Moraine engine bearings are attractively packaged, easily identified on your shelves.



STEEL
MATRIX
BABBITT

Photo-Micrograph of Cross Section of M-100 Bearing, Magnified 33 Times

THE MATRIX MAKES THE DIFFERENCE

Steel-backed intermediate matrix, of porous copper-nickel, bonds mechanically, as well as metallurgically, with high-lead babbitt having a thin overlay.

The exclusive Moraine matrix (or middle layer) supporting the babbitt and bonded to the steel back makes the M-100 8 Ways Better!

- 1 Greater resistance to fatigue
- 2 Increased load carrying capacity
- 3 Greater conformability
- 4 Greater embedability
- 5 Stronger bond
- 6 Greater resistance to scoring
- 7 Greater resistance to corrosion
- 8 More durability

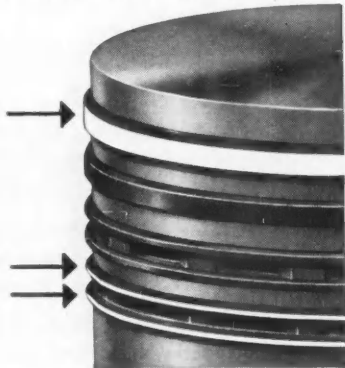


**moraine
products**

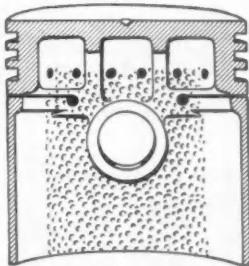
DIVISION OF GENERAL MOTORS, DAYTON, OHIO

Quick Seating

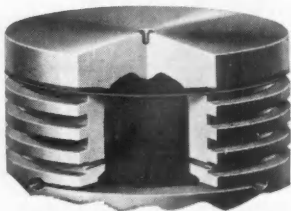
**EVERY RE-RING JOB
DESERVES ALL THREE...**



1. Kromex Ring Sets are the most economical, measured by miles. Factory-seated for instant oil control—chrome-faced top ring and oil ring side rails for longest wear.



2. Sealed Power SUPER-SIZER is the world's best resizing method, increases resiliency and outward tension on thrust faces, expands skirt to original close fit, leaves piston skirt surface smooth.



3. Sealed Power GI-60 Groove Insert is the only dependable, economical method of restoring top groove to original size and protecting against future wear.



Sealed Power KromeX

PISTON RING SETS...

assure your customer

- quick seating
- smoother performance
- faster pick-up
- double ring life
- maximum oil economy
- positive lubrication

assure YOURSELF

- better-satisfied customers
- more new customers
- no come-backs

SEALED POWER CORPORATION • MUSKEGON, MICHIGAN

Sealed Power Piston Rings

BEST FOR RE-RING!

BEST FOR RE-BORE!

RINGS • PISTONS • PINS • SLEEVES • VALVES • WATER PUMPS

executive section Jobber

News NotesFrom the Editors

"Parts Source" Law Covers All Outlets

A NEW ORDINANCE APPROVED IN DETROIT governing the sale of used parts may have national significance. It has been designed to curb the flow of stolen parts into the automotive repair business.

THE LAW HAS BEEN CLARIFIED TO INCLUDE "all" automotive establishments which use, buy or sell used parts, and to require them to keep complete records of sources from which parts are purchased.

CERTAIN TYPES OF OUTLETS, particularly some smaller operators and gas stations were not required to do so in the past, with the result that they were prime "dumping grounds" for parts from stolen cars.

UNDER THE NEW LAW, these establishments must obtain a license and be able to give a full account of parts inventory to police authorities, who will make constant spot checks for "hot" parts.

No Need for Black Market Glass Deals

REPLACEMENT AUTOMOTIVE GLASS ITEMS are very tight, but glass companies say there is no need for repair shops to pay black market prices for windshields or windows.

LARGE CAR COMPANIES ARE ALLOCATING some items on a "car down" basis but there is enough glass to keep all vehicles rolling. However, replacement of chipped, or scratched glass may be deferred until the supply improves.

GLASS COMPANIES WILL BRING in new manufacturing facilities after the first of the year and the supply should be in balance with needs by next spring.

Big Three Hike Parts Prices

THE BIG THREE AUTOMOBILE COMPANIES are in the process of revising replacement parts prices upward. General Motors was first to start the re-pricing; Chrysler and Ford now are in the process or soon will start. Increases are estimated at from 4-1/2 to 5 per cent on the average.

Mobile Transmission School in Okla.

AUTOMOTIVE WHOLESALERS OF OKLAHOMA are working out a plan in cooperation with the technical training school of Oklahoma A. & M. College for a series of schools to train repairmen in automatic transmission service.

THE BASIC IDEA IS TO GIVE independent repair shop mechanics training on automatic drives equal to that of dealer mechanics. The mobile school will be mounted in a specially equipped truck.

IN ADDITION, THERE WILL BE AN EXPERIENCED instructor in charge. A nominal fee will be charged to repairmen for the course.

P.P.G. Sales Jump 39%

PITTSBURGH PLATE GLASS COMPANY and consolidated subsidiaries sales for the first nine months of 1955 were \$428,949,999, an increase of 39 per cent over sales of \$309,278,171 for the same period of 1954.

FOR THE THIRD QUARTER OF 1955, the company had sales amounting to \$140,414,174 as compared with \$107,046,066 for the third quarter of the preceding year. The figures for 1955 include Canadian Pittsburgh Industries, Ltd., a wholly-owned Canadian subsidiary.

Cooling System Service—It's Profitable

"THE IMPORTANCE OF COOLING SYSTEM SERVICE," a 16mm color film is being shown by Olin Mathieson Chemical Corporation to automotive jobbers and dealers throughout the country.

THE FILM DESCRIBES HOW CARS CAN BE PROTECTED and more profits can be made by properly servicing the cooling system. There is no product identification in the film which is designed to teach automotive men how to sell.

U. S. ECONOMY . . . by Neil R. Regeimbal



Happy Days in '56—A Prediction

GOOD TIMES ARE TO BE ON HAND IN 1956, predicts Under Secretary Walter Williams, U. S. Commerce Dept. It's important, he believes, for buyers and sellers to have confidence and responsibility.

HE SEES PLENTY OF BOTH NOW, with the public buying briskly and businessmen meeting the demand. Sales concerns, before expanding, are making certain of the market for new and broadened lines.

Individuals Get Tax Cut Attention

TAX-CUTTING PLANS WILL BE AS PLENTIFUL as handshakes when Congress returns to Capitol Hill. The serious drive, though, will be to help the individual taxpayer, not the business firm

ONE PLAN ALREADY ADVANCED is to raise the personal income tax exemption from the present \$600 to \$700. Another is to trim taxes in relation to the size of the taxpayer's family, no matter what his income is.

OPERATION

JOBBER

Customer Clinics Attract Interest

A RECENT survey on jobber advertising practices among several thousand automotive jobbers turned up the interesting and significant fact that customer meetings or clinics stand ace-high with hundreds of jobbers as a successful method of advertising and sales promotion. Direct mail advertising was first choice.

By way of confirmation and substantiating the facts disclosed in the first survey, a second survey was conducted among a nation-wide cross section of independent repair shops, the jobbers' number one customer. Independent garage owners, it was learned, not only attended several jobber-sponsored clinics each year but also urged their employees to attend. In fact it was apparent from this latter survey that customer meetings or clinics were growing in popularity all the time and there should be more and not fewer of them. The findings also conclusively indicated that refreshments and entertainment, as a drawing card, were not the real reason why repair and service men attended clinics.

Two Questions

With these facts in focus, both jobbers and manufacturers should canvass their own programs to determine two things—do we have enough customer meetings or clinics and are they good ones?

Customer meetings are essentially a business proposition to everyone involved. To justify themselves they must "pay off," either in actual dollars immediately or in a reasonable time, or in good-will.

One well-known jobber puts it this way: "Have a good reason, not an excuse to hold a clinic!" When customer meetings are planned and conducted to make sense from a dollar standpoint they can contribute greatly to the sales efficiency of the jobber's organization. Customer meetings make it possible for jobber and manufacturer to present or demonstrate products and services to a lot of people at one time. Sales are stimulated. The trade is informed and educated. Jobber salesmen, themselves, are trained and informed.

Dollar Volume

When customer meetings are held, it makes sense to devote them to KEY lines—the lines which mean most in dollar volume and profit or which have the greatest influence on the jobber's over-all business.

Aside from Good-Will, which is always a desirable product of all good customer meetings, results, from the standpoint of actual sales and the opening of dealer accounts, can be both immediate and long-range. Some customer meetings, especially clinics, produce sales dur-



ing the event. Other meetings produce sales following the event.

Results do not come automatically. They must be planned for, and worked for, frequently for months afterward.

The "Dollars and Sense" of customer meetings affects manufacturers just as it does jobbers. The most successful affairs are planned and conducted with full appreciation of the fact that there are definite limits on what jobbers and manufacturers have a right to expect of each other.

Good planning with details clear and plans complete will usually forestall failure to meet objectives.

If you haven't given due consideration to the important subject of a well-conceived series of customer meetings or clinics, why not take a few tips from this information and "Give 'Em More Clinics!"

signs of the times

Wholesaler Group Formed In Calif.

Final incorporation papers for the new statewide group of the California Automotive Wholesalers Association were formally signed on November 4 and officers and directors were elected on November 5 at a meeting held at the Hacienda Motel in Fresno.

Elected to serve as officers of the newly-formed organization are President Les Wyre, Car Parts Co., Los Angeles; First Vice-President Lou Cresta, Cresta Bros., San Francisco; Second Vice-President Al Zimmerman, Benson & Zimmerman, Modesto; Secretary Joe Erman, Automotive Center, Hayward; and Treasurer Bob Porter, Southern Auto Supply, Bakersfield.

Chosen as Executive-Secretary was Glen Gaffney, Secretary of the East Bay Automotive Jobbers Association, who will headquarter at Berkeley.

Newsletter Added

Something new has been added to the national "Get It From Your Jobber" Program for automotive jobbers, now in its sixth year. It's a new service in the form of a monthly NEWSLETTER which will include specialized information for automotive jobbers on markets, selling, merchandising and advertising.

Contributing to the NEWSLETTER will be members of Automotive Advertisers Council's Industry-Wide Program Committee, all skilled in sales and advertising of all types of automotive products used in the Automotive Service Industry.



MARYLAND'S GOVERNOR Theodore R. McKeldin, left, receives a special copy of the booklet, "STOP SMOOTHLY SAFELY," from Paul E. Burke, executive director of the Maryland Traffic Safety Commission in a recent campaign to reduce automotive accidents in that state. The booklet was prepared as a public service by the Raybestos Div., Raybestos-Manhattan.

Creamer Honored

The Automotive Boosters Club #13, with headquarters in New York City, recently passed a resolution making John F. Creamer, president of Motor and Equipment Wholesalers Assn., an honorary life member of their Club.

B & D Forms South African Subsidiary

A South African subsidiary company with headquarters in Johannesburg has been formed by The Black & Decker Mfg. Company. Alonzo G. Decker, Chairman and President, announced recently. The name of the new portable electric tool subsidiary is Black & Decker South Africa (Proprietary) Limited.

New MEMA Directors

The following were recently elected directors of Motor and Equipment Manufacturers Association for the 1956-57-58 term: A. J. Bradley, Commercial Solvents Corp.; S. G. Phillips, Dole Valve Co.; J. M. Wells, Ingersoll-Rand Co.; and J. D. White, Triplex Corp. of America.

Elected a director of MEMA for the 1956 term was C. P. Brewster of K-D Manufacturing Co.



SCENE FROM CURRENT CLASSROOM session of Carter Carburetion School in Philadelphia. Bob Erny, owner of R. H. Erny & Co., is instructor of the eight-week course for which 16 mechanic-students have enrolled. Standing beside Bob is Russ Bischof (at left) who is eastern division manager of the Carter Carburetor Corporation. Classroom interest by the students is keen.



ABOVE GROUP of warehouse distributors from the southwest were guests of the Monroe Auto Equipment Company at their hunting lodge on Lake Erie recently. The hunting prowess of the automotive parts men was well proven by the large bag of game, both ducks and pheasants, that they brought in. They are examining, from the Monroe gun collection, an old 4-gauge flintlock whose origin is lost in antiquity. From left to right—Back Row: J. E. Bickel, Merchandising Manager, Monroe Auto Equipment Co.; John Stringer, B. B. Burk Co., Dallas, Tex.; H. B. Braden, American Gear, Dallas, Texas; Elmer

Miller, Straus-Frank Co., Dallas, Texas; Joe Owens, Owens Supply, Enid, Okla.; Sid Revis, Standard Parts Co., Tulsa, Okla.; C. S. McIntyre, Vice President & Sales Mgr., Monroe Auto Equipment Co., Monroe, Mich.; Front Row: Carl Tate, J. B. Cook Co., Little Rock, Ark.; B. B. Burk, B. B. Burk Co., Dallas, Texas; Jack Durrett, Tyler Service Parts, Tyler, Texas; T. C. (Bud) Garrett, Straus-Frank Co., Dallas, Texas; Vern Kleier, Ponca City Automotive, Ponca City, Okla.; Mark Hanna, Hanna-Gray Co., Ft. Smith, Ark.; also attending but not in the picture, Louis Barnett, Cogdell Auto Parts, Ft. Worth, Texas.

AAC Forecasts High '56 Business Level

Greater advertising and promotional efforts and a high level of business in the automotive service market in 1956 were foreseen by members of the Automotive Advertisers Council at the Fall Meeting of the Council held in Chicago recently.

This optimistic view was included in a report on the results of a recently-completed survey of manufacturers advertising plans presented by L. C. Dobrunz, Wagner Electric Co. The survey was made among members of the Automotive Advertisers Council.

The report disclosed that practically all manufacturers represented in the Council were making plans for increasing their adver-

tising budgets for 1956. On questions concerning 1955 sales to date and expected sales volume for 1956, the picture appeared to be exceedingly bright for manufacturers, jobbers and their customers. A large majority of Council members reported greater sales thus far for 1955 over 1954 and a healthy sales increase was forecast for 1956.

Other discussion leaders and their subjects were: Howard J. Hopkins, Purolator Products, who talked on better methods of helping dealers promote products; John Norwood, Sealed Power, who outlined a simplified dealer stock-check form for jobber use; George Einhart, Radiator Specialty, who presented a cooperative newspaper advertising plan for retail automotive outlets; and Carl D. McWade, chairman of the Council's Catalog Committee who presented several

new ideas to increase the use and effectiveness of today's catalogs.

C. K. Johnson, "Zerone-Zerex" Division of E. I. duPont de Nemours & Co., Inc., and D. E. Cunningham, Raybestos Division of Raybestos-Manhattan, Inc., discussed the all-important related questions of more productive use of display and direct mail material at the jobber and retail levels; Al Joseph, AP Parts Corp., and Warren Stuart, Belden Mfg. Co., gave a two-part presentation on "Here's How To Meet The Mel Turner Challenge" which was a follow-up of the same subject on the Council's Spring Meeting agenda.

Following a symposium on national consumer advertising media emphasizing merchandising at the jobber-dealer levels, reports were made by chairmen of the Council's standing committees.



"SHOCK ABSORBERS make Springs Behave," is the theme Arlene Kent portrays here in her role of oriental snake charmer. Arlene is Miss Tune-Up The Ride in the film "How About You," just released by Monroe Auto Equipment Company.

"Old Timers" Club Of Illinois Meets

The second annual meeting of the Central Illinois "Old Timers" Club was held in November at the Springfield Auto Supply Co. building in Springfield. Membership in the club is composed of both men and women who have been in the automotive industry twenty years or more.



MECHANICAL ARTS EXHIBIT was held last month in the Department of Commerce building in Washington, D. C. Purpose of the exhibit was to show technological advances made by inventors and industries under the American patent system. On opening day, James D. Abeles (center), president of Puroator Products, Inc. (one of the companies participating in the exhibit) is shown explaining his company's new automotive air filter to Under Secretary of Commerce Walter Williams (left) and Patents Commissioner R. C. Watson.

New Appointments At Walker Mfg. Co.

Chester C. Moss, president of Walker Manufacturing Co. of Wisconsin, recently announced the appointment of a new internal sales organization.

Appointed sales manager of the Wholesale division was Wayne Rapp; Robert Archer will serve as field sales manager of Wholesale sales; and J. W. Jaspersen was appointed sales manager of Walker Original Equipment division.

All company sales promotion programs and advertising remain under the direction of T. Faxon Hall, vice pres. of public relations.

New Jersey ATA

The New Jersey Automotive Trade Association at its annual convention this Fall elected and installed the following officers:

Elmer Blauvelt, president; Gerald S. Kleinhanz, 1st vice president; George G. Downes, 2nd vice president; Eldred R. Crow, 3rd vice president; L. John Hutton, treasurer; William L. Mallon, secretary; and Otto P. Henneberger, business manager.

Houdaille-Hershey Makes Name Change

Houdaille Industries, Inc., is the new name of the corporation which since 1929 has been known as the Houdaille-Hershey Corporation, it was announced recently by Ralph F. Peo, president.

Stockholders of the corporation approved the change as being more descriptive of the corporation's widened scope of operations.

ABCI Elections

At the organizational meeting held in Chicago, of the Automotive Battery Charger Institute, the following men were elected officers: president, Herman J. Lange, Marquette Manufacturing Company; vice president, Kenneth Dawkins, Franklin Manufacturing Company; secretary and treasurer, Leonard O. Zick, Allen Electric and Equipment Company. These officers constitute the Board of Governors.

Industry Meetings

- Feb. 6-9, 1956—Automotive Accessories Manufacturers of America Exposition, Navy Pier, Chicago, Ill.
- Feb. 21-22—Motor and Equipment Wholesalers national membership convention, San Francisco, Calif.
- Feb. 21-22—National Standard Parts Association convention, Mark Hopkins Hotel, San Francisco, Calif.
- Feb. 22 — Automotive Booster Club banquet, Palace Hotel, San Francisco, Calif.
- Feb. 23-26—Pacific Automotive Show, Civic Auditorium, San Francisco, Calif.
- Apr. 11-14—Middle Atlantic Regional Automotive Show, Commercial Museum, Philadelphia, Pa.
- May 10-13 — Southwest Automotive Show, Houston Coliseum, Houston, Tex.
- May 25-26 — Southeast Automotive Show trade conference, Asheville, N. C.
- June 3-6—Automotive Engine Rebuilders Association, 34th annual convention, Sherman Hotel, Chicago, Ill.
- June 7-10—Upper Midwest Automotive Trade Show, Minneapolis Auditorium, Minneapolis, Minn.

Seat Belt Makers Convene in Chicago

Seventy-one automobile seat belt makers from all sections of the country recently concluded a two day meeting in Chicago, Ill. by voting to form the National Association of Automotive Safety Belt Manufacturers and electing officers.

Carl Rupert, head of the Rupert Parachute Co., Wheeling, Ill., was named president. E. W. Bolster, Aero Safety Equipment Co., Los Angeles, Cal., is executive vice president, and C. H. Pulley, Irving Airchute Co., Lexington, Ky., is secretary. The treasurer is Harley Van Sickle, Sparks-Withington Co., Jackson, Mich.

"Major objectives of the group are to serve and protect the public," Mr. Rupert declared. "There has been a tremendous boom in the sale of safety belts during recent months and we are endeavoring to prevent unscrupulous persons from placing on the market, untested, substandard belts of questionable safety value. We are now in a position to cooperate with such groups as the Society of Automotive Engineers, the American Standards Association and other safety groups in the maintaining and improving of standards of quality in the manufacture of automotive safety belts."



SPRAY PAINTING SCHOOL at The DeVilbiss Company, Toledo, Ohio recently took on the aura of a "miniature United Nations." Here the group working in a spray booth try their hand at applying paint to a test sheet for study of the spray pattern. The group is attending various trade schools in the United States with arrangements made by the Export Division of The Chrysler Corp. The countries represented by the enrolled students include India, Switzerland, Hawaii, Liberia, and Japan. Instructor for the class was Robert J. Howarth.

Automotive Wholesalers' Sales and Inventories

Bureau of the Census, Department of Commerce

Region	Sales			Inventories	
	Per Cent Change				
	Sept. 1955 from Sept. 1954	Sept. 1955 from Aug. 1955	9 Mos. 1955 from 9 Mos. 1954	Sept. 1955 from Sept. 1954	Sept. 1955 from Aug. 1955
New England.....	.....	.....	.....	.....	.....
Middle Atlantic.....	+12	- 4	+10	+ 5	- 1
East North Central.....	+12	- 2	+17	+13	+ 1
West North Central.....	+ 7	+ 8	+ 8	- 7	- 3
South Atlantic.....	+18	0	+18	+ 2	+ 1
East South Central.....	+10	- 2	+15	+23	0
West South Central.....	+ 9	- 1	+ 4	+ 1	+ 1
Mountain.....	+15	+ 4	+16	+16	0
Pacific.....	+15	- 3	+16	- 5	+ 2
Entire United States.....	+12	- 1	+13	+ 4	+ 1

Indicators of Business Activity

These figures are based on latest thirty-day reports

	Latest Data	Month Before	Year Ago	Percentage Change from—	
				Month Ago	Year Ago
PRODUCTION					
Motor Vehicles (Units).....	610,000	559,962	287,705	+ 8.93	+112.02
Industrial—F. R. B. 1947-'49=100 (Adj.).....	141	140	124	+ 0.71	+ 13.71
SALES					
New Cars.....	615,000	654,532	395,943	- 6.04	+ 55.32
Replacement Tires (Units).....	5,170,474	5,980,297	4,532,958	-13.54	+ 14.06
Manufactures (\$ Millions)					
Durable Goods.....	\$13,846	\$13,745	\$10,832	+ 0.73	+ 27.82
Non-durable Goods.....	\$13,550	\$13,484	\$12,176	+ 0.49	+ 11.28
Department Stores, 1947-'49=100.....	122	121	112	+ 0.83	+ 8.93
GENERAL					
Consumers' Price Index, 1947-'49=100.....	114.9	114.5	114.7	+ 0.35	+ 0.17
Civilian Employment.....	65,161,000	64,733,000	62,141,000	+ 0.66	+ 4.86
Unemployment.....	2,131,000	2,149,000	2,741,000	- 0.84	- 22.25

Motor Age's Who's Who

Park Q. Wray, Jr., has been appointed general sales manager of National Motor Bearing Co., Inc. Mr. Wray will direct all National



Oil Seal sales activities in the original equipment and replacement parts markets.

Ronald S. Hulse has been elected vice president and general manager of Southern Asbestos Company, a subsidiary of Thermoid Company.

Dan Jones has been appointed sales manager of the newly created replacement division of the Chicago Rawhide Manufacturing Co.

J. E. Morrison has been appointed Pacific region sales manager for the Exide Automotive Division of the Electric Storage Battery Company.



C. A. Kirkling (photo) has been appointed national field manager for the Irontite Motor Seal Division of the Salsbury Corporation. **Frank Birillo** replaces him as the company's Motor Seal representative in the northern California territory.

William M. Meeker has been elected chairman of the board and president of the Grover Smith Manufacturing Co. **Grover C. Smith** has retired from these positions but remains a member of the board of directors.

Sydney E. Leese has been appointed chief engineer of the Houdaille-Hershey Corporation's Buffalo Automotive Division.

John W. Elsworth has been named manager of the Special Brands Division of the R. M. Hollingshead Corporation.

Robert G. Wingerter (left) has been elected general manager of the Timken Roller Bearing Company's Automotive Division. He



succeeds **Edgerly W. Austin** (right) who recently retired from the post which he held since 1928.

M. H. Smith has been named assistant to the vice president of replacement sales for Electric Auto-Lite Company. **A. A. Feldman** has become sales manager for national accounts; **Robert Price** was named merchandising manager for batteries; and **B. A. Noonan** is now merchandising manager for service parts for the same company.

Richard S. Jay has been appointed assistant to vice president of sales for American Bosch Division of American Bosch Armament Corporation.

M. G. Smith, former executive vice president of Rockwood & Company, has been appointed comptroller of The Electric Storage Battery Company.



Nelson H. Mapes has been named Texas territorial manager for the Martin-Senour Paint Company automotive division. **Walter J. Barrett** has been named mid-west territorial manager for the same company.

C. C. Joslyn has been appointed sales manager for the eastern division of the Barrett Equipment Company. **Dick White** has become sales manager for the western division of the same company.

Joseph Q. Benjamin has advanced to the newly created position of assistant to the equipment sales manager of the AC spark plug division of General Motors. **William L. Simpson** moves up to equipment sales office manager for the same company.

B. A. MacLeod has been appointed western regional sales manager of the Willard Storage Battery Company.

Earl M. Douglas has been named vice president of Dana Corporation. He will have re-



sponsibility over technical activities in product engineering.

Mineral Oil May Go Into Transmissions

HIGH-PRICED SPECIAL AUTOMATIC TRANSMISSION OILS may be on the way out. The automotive industry is working with oil companies to develop a new type oil known as "Type C."

THIS IS A GOOD GRADE OF MINERAL OIL similar in specification to 2104-B which the military has used successfully over a considerable period in both engines and automatic transmissions.

Fuel Injection on the Horizon

SERIOUS CONCENTRATION ON FUEL INJECTION SYSTEMS may bring the first such applications in American production cars on 1957 models. At least one high priced car is almost certain to have it.

IT IS REPORTED TO BE A MODIFIED SYSTEM injecting fuel into the manifold under pressure from a pump. The cost and complexity of current 4-barrel carburetors have narrowed the price differential between carburetor and fuel injection systems.

Motorama 1956

GENERAL MOTORS HAS FIXED THE DATE for its 1956 Motorama shows. They are: January 19-24, New York; February 4-12, Miami; March 3-11, Los Angeles; March 24-April 1, San Francisco; April 19-29, Boston. Each division will show an "idea" car and there will be one by the corporation.

Separation Proceedings for Plymouth

PLYMOUTH WILL KICK OFF its exclusive dealer program in Kansas City about the first of the year. Three other cities also will be selected for the separation program.

THE PROGRAM WILL BE CARRIED OUT SLOWLY at first in order to work out the best methods of making the transition with the least disruption to existing dealers.

61,000,000 U. S. Cars and Trucks

BUILDING UP FAST IS THE NUMBER of U. S. cars and trucks that must be serviced and repaired. The Bureau of Public Roads predicts there will be more than 61 million registered vehicles on the highways before December 31.

INCLUDED ARE TO BE 50.9 MILLION PASSENGER CARS and over 10.3 million trucks and motor coaches. Looking ahead to 1965, the bureau sees the vehicle total mounting sharply to 81 million.

Heater Problems Get Answers

SLOW WARMUP OF NEW, MORE EFFICIENT V-8 ENGINES creates heater problems in cold climates and brings many complaints from customers. One answer to the problem may be use of thermostatically controlled engine fans.

FORD HAS SUCH A FAN AVAILABLE for trucks now, others are under development and could be adapted to passenger car use. They could be either electrically or hydraulically actuated.

CHRYSLER HAS MET THE WARMUP PROBLEM by offering a gasoline heater which provides warmth almost instantaneously.

Look Mom, No Hands!

AN EXPERIMENTAL GAS TURBINE CAR with electronic controls will be shown by one of the large car companies at the shows next year. It is strictly a "concept" model.

THERE ARE NO IMMEDIATE PRODUCTION possibilities, but the car will offer some interesting developments, particularly in the use of electronics to guide the vehicle.

Introductions Get Earlier

EVIDENCE INDICATES THAT 1957 MODELS will be introduced earlier in the year than was true of 1956 lines. A July starting date is reported under consideration but has not yet been substantiated.

THE SUCCESS OF 1956 MODELS probably will have a lot to do with the 1957 model out-date. Reports say Ford again will be the first to announce new models next year.

Finance Companies Don't Take as Many Back

REPOSSESSIONS OF CARS BOUGHT ON CREDIT are slightly below normal indicating that all the fuss about unsound financing represents a danger more apparent than real.

MEMBERS OF THE AMERICAN FINANCE CONFERENCE, representing 360 independent finance companies meeting in Chicago, reported that repossessions now run about 3½ per cent with some companies saying delinquencies are down 40 per cent below a year ago.

More Space for Chicago Dealer Show

CHICAGO AUTOMOBILE DEALERS will have about 290,000 sq ft of ground floor exhibit space for their automobile show, January 7 through 15. A new addition to the Amphitheater in Chicago adds 180,000 sq ft of space.

EIGHTEEN CAR MANUFACTURERS AND EIGHT TRUCK BUILDERS, plus some foreign makes, will exhibit at the show. Kaiser and Willys will not exhibit, confirming their withdrawal from the passenger car business.

GM vs Colorado Dealer Law

GENERAL MOTORS' COURT ATTACK on Colorado's newly amended dealers license law is significant to manufacturers and dealers. Its outcome will influence states that have, or are contemplating, laws regulating manufacturers' relations with dealers.

GM IS ATTACKING IN PARTICULAR the amendments providing that manufacturers must honor contracts with dealers after they expire, unless they can prove just provocation for cancellation in the courts.

Marriage of Studebaker-Packard Parts

STUDEBAKER-PACKARD CORPORATION plans much greater interchangeability of parts between Packard and Studebaker models on 1957 models. It has not yet had time under its integration program to reach anything like maximum possibilities on interchangeability on the two makes.

Suction Holds Speeding Car to Road

SERVICE SPECIALISTS MAY FIND an unusual metal device slung beneath automobile bodies if one newly-patented idea takes hold. It is a metal plate, called an airfoil, running from the front bumper almost halfway down the length of the car.

THIS PLATE IS DESIGNED TO CREATE SUCTION at high speeds and help hold the car on the road. The U. S. Patent Office granted the airfoil patent to James R. McInnis, of Brunswick, Ga.

Stylish Glass for '57

EXCITING STYLING POSSIBILITIES of automobile glass may be showing up by the time 1957 models appear. Three already in the talk stage are curved side windows, rear windows which can be raised or lowered, and the wrapover windshield in which the upper area curves back into the roof.

Washington Wire

by Ray M. Stroupe



Variety Keynotes NADA Convention

VARIETY WILL BE OFFERED IN SPEECHES before the National Automobile Dealers Association convention, beginning January 28 in Washington. Commerce Secretary Weeks, a key figure in the transportation field, will be a featured speaker.

BUSINESS MANAGEMENT SPECIALIST AND AUTHOR, Fred Smith, is to talk on sales. Marketing expert, Charlotte Montgomery, will cover a special sales subject in her talk, "Selling Automobiles to Women."

Government Purchasing Centralized

CAR AND TRUCK BUYING for civilian branches of the government will now be handled in fewer places, as a means of saving money. A new National Buying Division of the General Services Administration is to do this work in New York and Washington.

Excise Exemption Asked for Training Cars

IT'S TIME CONGRESS BECAME INTERESTED in the high school driver training program, the American Automobile Association insists. Aided by public-spirited car dealers, the program will reach more than a million students during this school year.

BUT NOT ONE IN FOUR WILL GET ENOUGH PRACTICE behind the wheel. The government could help by lifting the excise tax from cars the dealers lend to the schools.

Safer Cars Only Part of Safety Answer

SAFETY DEVICES ON THE NEW CARS can go only part way toward preventing highway crashes, warns Surgeon General Leonard Scheele, U. S. Public Health Service. He sees accident control as both a national and local problem.

DR. SCHEELE NOTES SOME CARELESSNESS in giving out lifetime driving licenses. These licenses are sometimes issued with no thought of the effect that health changes will make on the driver.

Billions of Miles Mean More Business

MOTORISTS ARE RUNNING UP GREATER MILEAGE on the highways and creating more business for automobile service shops. Last year, reports the Interstate Commerce Commission, they drove 548 billion miles between cities.

THIS MEANS NEARLY 88 PER CENT of all out-of-town mileage was put on cars. Automobile travel picked up by 3.7 per cent in 1954, compared with 1953, while bus travel dropped nearly 10 per cent.

Laws Asked on Car Financing

STRONG ACTION TO KEEP AUTOMOBILE FINANCING HONEST is taking shape in the National Automobile Dealers Association. Frank Yarnall, NADA president, plans to ask his directors to back a model bill blocking double charges for tax, insurance and other items.

THIS WOULD PUT A LID ON RATES charged installment buyers of cars. If the NADA gets behind the bill, reasons Mr. Yarnall, the states will adopt it.

AD-X2 Fight Still Going

ALL MAY NOT BE OVER in the AD-X2 battery additive advertising case. Some government officials, upset when a Federal Trade Commission examiner decided there was no false advertising of the powder, want to keep the fight alive.

THE EXAMINER HEARD STATEMENTS that AD-X2 makes batteries last longer and take a charge better. Jess Ritchie, who produces AD-X2, says he plans to make and sell more of it.

Minimum Wage Exemptions Cut

AUTOMOBILE SALES AND SERVICE EXEMPTIONS from the minimum wage law may be restricted by the U. S. Labor Department. Several classes of work would be deprived of the retail exemption.

THESE INCLUDE FLEET SALES, formal bid sales, and sales for resale. Also not exempt would be contract repair work at a fleet-maintenance price and sales of some special heavy vehicles and bodies.

Tire Discount Battle Rages On

GOVERNMENT LAWYERS WANT COURT SUPPORT for the Federal Trade Commission limit on discounts in tire sales. This rule, hotly opposed by tire makers and retail chains, would put a one-carlot ceiling on the quantity of tires eligible for producers' discounts.

IT WAS BATTED DOWN by a district court in September. Now the scheme is to have a higher court reverse that decision.

Report to Our Readers



More Help in Sight

THE serious shortage of trained automobile mechanics isn't news. Just how critical the situation is for the future and what is being done about it rates important headlines.

Myrle E. St. Aubin, director of General Motor's Service Section and chairman of the Automobile Manufacturers Assn. Service Managers Committee, reports that only about 10,000 automobile mechanics are being graduated each year by our nation's schools whereas the need for new mechanics is estimated at from 40,000 to 45,000 a year.

The AMA Committee, in cooperation with the American Vocational Association, in order to assist the nation's schools in mechanic training programs has developed and released a basic book of standards for automobile mechanic training. The two organizations started their current program a few years ago to answer problems of vocational schools and to help meet the growing shortage of capable, properly trained automobile mechanics.

The new book is the latest step in a long series of programs adopted by the automotive industry to encourage and promote more and better training of service personnel. Schools

have been provided with materials for use in student vocational counseling. Engines, chassis, parts, service equipment, manuals, charts, books, have been liberally donated.

Mr. St. Aubin said that there are now about 700,000 automotive mechanics in the U. S., a ratio of one for every 83 vehicles registered. With the increasing complexity of automotive vehicles it is doubtful that the ratio will grow any less in the future with the expected 81 million vehicle registrations by 1965. The total national force of automobile mechanics must expand by at least 275,000, Mr. St. Aubin said. This would require about 27,500 mechanics each year to take care of the increased registrations and another 15,000 to 18,000 to replace the normal attrition through death, retirement, shifts to other jobs, upgrading to managerial positions and ownership.

The new book, called "Standards for Automotive Service Instruction in Schools," is in ten sections and deals with such subjects as opportunities in the service industry, guidance, rooms and buildings, supplies and equipment, curriculum, cooperative training, school shop service work, relationships between schools and dealers, summer work shops for teachers and cooperative teacher training programs.



Contribution to the second annual Safe Driving Day effort on December 1 was made by the outdoor advertising medium which displayed nationally a special 24-sheet poster that bore a portrait of President Eisenhower and his own personal message.

The Beautiful Season

THE time has come when we, the editors of **MOTOR AGE**, extend our heartiest greetings to every single one of our readers for a Merrie Christmas and a Happy and Prosperous New Year. "Peace be within thy walls. And abundance within thy towers."

Faithfully yours,

Frank P. Tighe

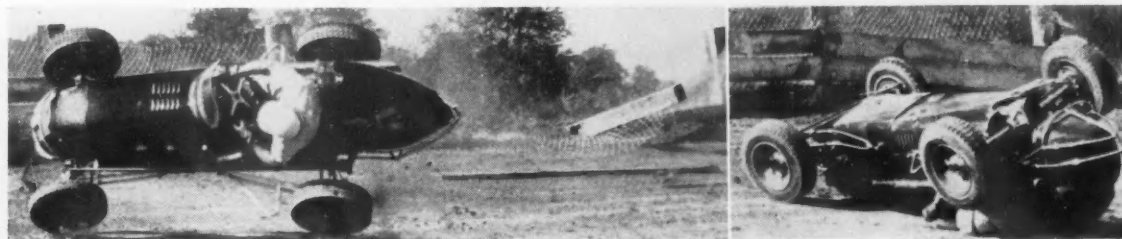
EDITOR



RABBIT SCOOTER: E. J. Hausmann dumps food into his rabbit cages as he rides in his motor scooter on his farm near Tampa, Fla. Hausmann has become a successful rabbit farmer. He started to raise rabbits after he was stricken in both his legs with arthritis.

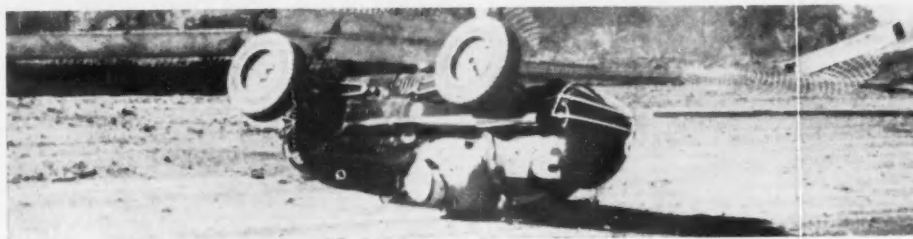
▲
SNOW RACE: One car sits at right angles to the icy course after plowing into a snow bank during a jalopy race on Lake Contoocook, near Jaffrey, New Hampshire. In the scene above an official rushes up with a yellow flag to slow down racers behind the stalled car. The race was held this year as part of the 24th Winter Carnival of the Jaffrey Outing Club.

▼
HE WALKED AWAY: Sequence below shows what happened after the car of Wally Hostetler hit a rough section of track in a qualifying trial for a midget car race at Terre Haute, Ind., not too long ago. The car turns over (left), seems to be crushing Hostetler's head (center), and comes to rest upside down (lower right). Hostetler was reported to have suffered only an injury to his arm in the accident.



► **HOOD-WINKED:** Practically any respectable automobile hood would likely take time out to wink at pretty visitors like Hollywood starlets Betty Ames, left, and Helene Hayden. The girls are posing on the hood of a new Mercury convertible which they have been driving on a 3000-mile promotion and publicity tour for the Los Angeles Lincoln-Mercury Dealers Association. The association counts its members from southern California, Arizona and Nevada.

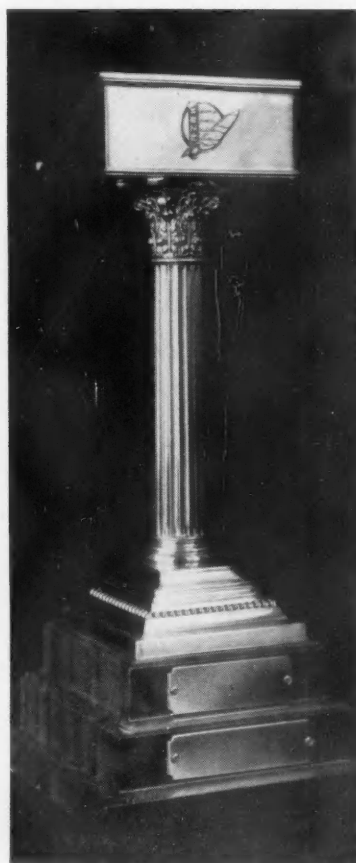
▼ **TARGET PRACTICE:** Below, detective examines the bullet-riddled convertible parked on a Chicago street on the northwest side of the town recently. When police located the owner, he said that he had shot up the car after returning empty handed from a hunting trip. The car had about 300 bullet holes.



Henry Ford II Chosen to Receive SBME "Voice of Business" Award

HENRY FORD II, young President of the Ford Motor Co., has been awarded the Society of Business Magazine Editors' annual "Voice of Business" award.

Mr. Ford was chosen by the business editors for "making the most substantial contribution to industry in 1955 in leadership, in business ethics, and in making it understood that most businesses are conducted with careful regard for the public interest."



Symbolizing the "Voice of Business" award is this handsome silver rostrum with a finished hard wood base.

The award was announced by Frank Tighe, Editor of *MOTOR AGE* and president of the Society, at last month's dinner meeting at the Statler Hotel, Washington, D. C.

Educational Grant

A \$500 educational grant goes with the "Voice of Business" award. The grant, named after Paul Wooton, long-time Washington newspaper and business paper correspondent, will be presented by Mr. Ford to a college student or graduate student studying business journalism.

Mr. Ford is the first recipient of the business award.

Henry Ford II, grandson of the company founder, became president of the firm in 1945, shortly after his 28th birthday.

A facilities expansion and modernization program which the company launched under his direction in 1946, is scheduled for completion in 1958 at a total cost of \$2,325,000,000.

Mr. Ford was instrumental in the establishment in 1949 of Detroit's United Foundation, the forerunner of unified fund-raising agencies for health and community activities throughout the country. He was national chairman of the Crusade for Freedom in 1952 and 1953 and has been chairman of the board of the American Heritage Foundation since his appointment in 1953.

Ford Foundation

Mr. Ford is also chairman of the Ford Foundation, among the world's largest philanthropic foundations; an alternate delegate to the United Nations, and has been named Industry's Man of the Year by both the Associated Press



HENRY FORD II

and United Press several times.

Besides the announcement of the "Voice of Business" award to Mr. Ford, the Society of Business Magazine Editors — whose headquarters is the National Press Building in Washington, D. C. — held their annual elections at the November dinner meeting.

Richard H. Morris, Editor of "Plant Engineering" magazine, was elected as the new president of the Society to succeed Mr. Tighe.

Other elections included Eldridge Peterson, "Printer's Ink," first vice president; Norman C. Firth, "Dun's Review and Modern Industry," second vice president; William A. Phair, "Hardware Age," secretary-treasurer, and Carl C. Harrington, "Mill & Factory," and Palmer Langdon, "Metal Finishing," to three-year terms as executive committee members.

Paul Wooton was nominated to another five year term as chairman of the executive committee.

Your Letter May Win Dec. Contest

DECEMBER'S Cover Contest is now underway. It is the last in a series of MOTOR AGE cover contests that began last May. As announced at that time, the contests would run for each of the remaining monthly MOTOR AGE covers in 1955.

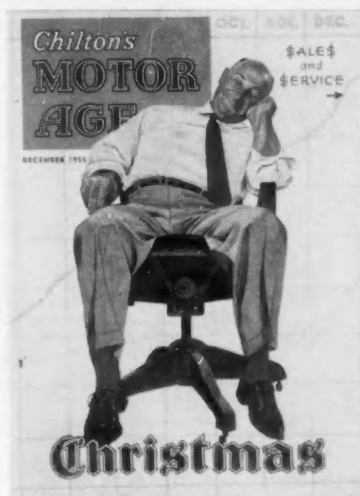
To enter the December and final contest — the award being the artist's original painting of the December cover (reproduced at the bottom of this page)—simply write a letter on your business stationery telling the editors of MOTOR AGE: "What I liked best about this, the December issue of MOTOR AGE." Sign your name and title.

The contest is opened to all subscribers of MOTOR AGE excepting employees of the Chilton Company, publishers of this magazine.

There is no entry fee whatsoever. All letters become the property of the Chilton Company and none can be returned. Deadline for the December contest is Monday, January 16, 1956.

Handsomely Mounted

The full color painting is a large illustration measuring 16½ inches x 22 inches. It will be delivered to



This is a reproduction of the artist's original painting for December.



George Beres, Jr., with August cover he received for prize-winning letter.

the writer of the winning letter suitably framed for hanging in his place of business, his office, his den, or game room.

Writing style, grammar, are not essential factors in winning any of the monthly contests. It is your ideas, your thoughts on what you like best in this issue that count.

August Winner

Winner of the August Cover Contest as announced last issue was George E. Beres, Jr., owner of George's Garage in Charleroi, Pa. Mr. Beres submitted the following prize-winning letter on the topic: "What I liked best about the August issue of MOTOR AGE":

"Editor of MOTOR AGE. I would like to enter your August MOTOR AGE Cover Painting Contest. MOTOR AGE really puts out clean and whole-

some book cover pictures. They in themselves tell a true story.

"First, I like the Newscoop which is invaluable to any garageman. Second, I like the 'Mechanic's Plea' of which more should be printed every month. Gathered from all garages they would make good printing.

"Third, I like the way you publish the latest information on servicing up-to-date jobs.

"Fourth, I like your advertisements and jokes, which are kept clean and very relating to everyday human facts. Thank you."

A photograph of Mr. Beres with his cover painting attractively mounted appears at the top of this page.

Remember, the December contest is the final cover contest in this series.



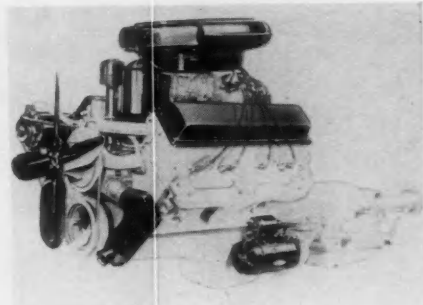
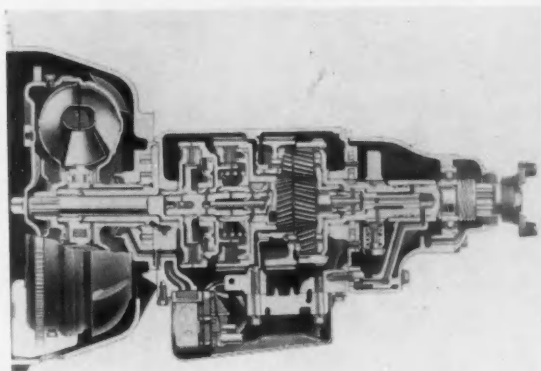
At left is the new Golden Hawk. Below is the Pinchurst 1956 station wagon.

Studebaker's

New Styling and Horsepower

In addition to the restyled "regular line," a bright new series of five-passenger sports-





Above is the 275 hp V-8 engine which powers the Golden Hawk. At immediate left is the Studebaker "Flightomatic" transmission unit.

for '56

type cars makes debut



The Studebaker President Classic four-door sedan is over 17 feet long.

NEW styling, engines ranging up to 275 horsepower, a new series of 5-passenger sports-type cars, engineering advances and a list of safety innovations and improvements are outstanding features in the line of Studebaker passenger cars for 1956.

The new cars represent the first Studebaker line to be developed in accordance with the product and marketing philosophies of the management of the new corporation. Century-old Studebaker and 55-year-old Packard were combined in October, 1954, to form the new full-line company headed by James J. Nance as president.

"Safety-Fin" Brakes

Mechanical innovations include an advanced automatic transmission—the new Flightomatic; special "safety-fin" brakes that increase

brake-drum cooling substantially to maintain none-fade efficiency when heavily used, and a color-lighted "safety-eye" speedometer.

Bigger in exterior appearance, the new Studebakers have greater room inside, and trunk room has been increased by 20 per cent.

Studebaker's new lines include 16 models—12 in the sedan and station wagon series, and four in the volume produced sports-type group.

Heading the nine models in the sedan series is the President Classic four-door V-8. The Classic model—more than 17 feet long and luxury-styled throughout—is powered by a new Sweepstakes V8 engine (298 cu in. displacement) with four-barrel carburetion. Horsepower is 210. Also powered by the Sweepstakes 289-V8 engine are two other sedans in the President series and the Pinehurst station

(Continued on page 112)



American Motors Presents Sweeping Design Changes for New Rambler

THE 1956 American Motors Rambler features sweeping changes in design, styling and engineering. Increased interior room and trunk space, larger window area, improved riding qualities are offered by the new Rambler.

Increased power and performance are provided by a new overhead valve engine, the result—according to American Motors engineers—of an eight-year development program. Fuel efficiency is attained through the combination of overhead valve system, downdraft carburetion, iso-thermal six-port manifold, and wedge-shaped combustion chambers.

Rated at 120 hp, the engine has a displacement of 195.6 cu in. and a compression ratio of 7.47 to 1.

Torque Tube Drive

A torque tube drive, featured in American Motors' senior cars, is incorporated in the '56 Rambler. The torque tube drive is an enclosed

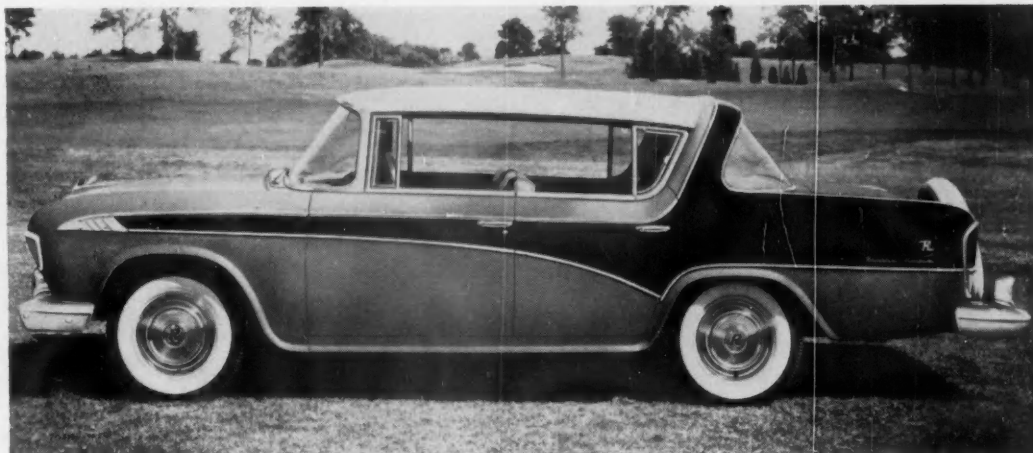
unit with no moving drive parts being exposed.

Improved riding qualities result from the use of deep coil springs on all four wheels and the addition of a front suspension cross-member mounted in rubber to the body sills. Lower control arms are mounted to the cross-member. The new suspension permits widening the front tread by more than three inches. The rear tread is five inches wider for a more stable ride.

Twelve Volt System

The '56 Rambler has a 12-volt electrical system for quicker cold-weather starting, higher generator output, and increased power for operation of lights and accessories.

Added safety is provided by an increase of almost 50 per cent in effective braking area. The brake and clutch pedals are of the suspended type, and the brake master cylinder is located on the firewall in an accessible position.



Above: The Rambler four-door hardtop for 1956.

Improved riding qualities have resulted from use of deep coil springs. A new overhead valve engine — 120 hp — is offered



Above: The four-door Super Sedan. In the Rambler line for 1956 is incorporated a torque tube drive.

Power brakes are standard equipment on all '56 Rambler custom models, and are available at extra cost on all other models. The power brake system is the "Treadle-Vac" type, permitting 25 per cent faster braking with 40 per cent less effort. Power steering of the direct linkage type, is available as an option for the first time on Rambler models.

Although overall width of the Rambler has been decreased, there is an increase in interior width at the belt-line. Shoulder room is increased more than five inches in front and back. Rear seat legroom is increased 2½ in. Added spaciousness extends through the trunk area with an increase of 25 per cent in luggage capacity.

More Glass Area

The roof panel is shallow and flat, permitting the glass area to be extended upward for an

(Continued on page 80)



Above: The four-door Cross Country station wagon. Ramblers for '56 have 12-volt electrical systems.



V-Line Styling for '56

Hudson Hornet and Wasp

Four types of transmissions available on new models. The new Hornet overhead valve

THE 1956 Hudson passenger car line includes a custom four-door sedan and two-door Hollywood hardtop in the Hornet V-8 series; a super and custom four-door and custom two-door Hollywood hardtop in the Hornet "Six" series; and a four-door sedan in the Wasp series.

Prominent styling feature of the 1956 Hudson line is the new V-shaped grille highlighted by a modern inner mesh pattern. The die-cast grille is integrated with new chrome headlight rings.

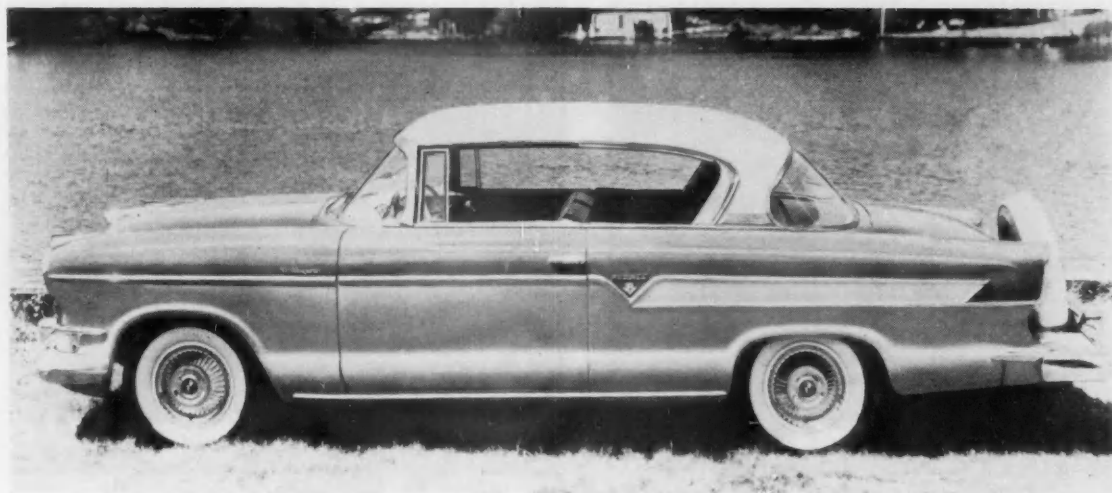
Twelve Volt System

All 1956 Hudson models are equipped with a new 12-volt electrical system. The new system insures better ignition performance, higher generator output, higher engine cranking

speeds for faster cold weather starts, and increased power to operate optional power assists, according to company engineers.

The new Hudson Hornet V-8 engine, developing 220 hp, has a compression ratio of 9.55 to 1 and a displacement of 352 cu in. This overhead valve V-8 engine has a short-stroke, low-friction design for greater power and better fuel economy. It also features a new high-lift camshaft, a twin-throat down-draft carburetor, and five main-bearings.

The Hornet Championship Six, with new hydraulic valve lifters and an improved camshaft design, is offered on all new Hornet models. Its horsepower has been increased to 165, with a compression ratio of 7.5 to 1. The Championship Six also is offered with "Twin H-Power," delivering 175 hp, available as standard equip-



Above is the new 1956 Hudson Hornet custom two-door hardtop. It uses a V-8 engine developing 220 hp. At top left is shown the Hudson Wasp for '56.

Make Debut

V-8 engine has 220 hp

ment on custom models and optional on super models.

The 1956 Hudson Wasp is powered by the Hi-Torque six-cylinder, L-head engine developing 120 hp, with a compression ratio of 7.5 to 1. This engine also is offered with "Twin H-Power" as optional equipment, increasing the horsepower to 130, with a compression ratio of 8.0 to 1.

Four Transmissions

Four transmissions are available on the new Hudson models. Syncromesh transmission is standard equipment on all 1956 models equipped with six-cylinder engines. Automatic overdrive and Dual-Range Hydra-Matic are offered as extra cost optional equipment on all Hudson

(Continued on page 84)



Above is the Hudson Hornet custom four-door sedan. Below is the Hudson "Hi-Torque" 6-cylinder engine.





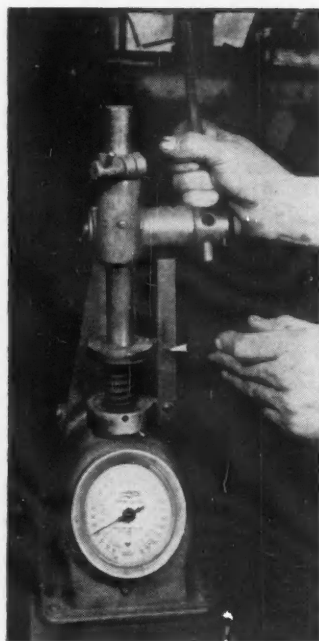
Above is the measuring of rocker arm clearance.



Grinding the valve seats to proper angle with stone.

When Grinding Valves

Selling Replacement Parts



Testing the valve spring tension.

Any car driven 25,000 miles or more stands as good

EVERY customer who owns a car with 25,000 miles on it is a good prospect for a valve and carbon job. On all the new high compression engines there is very little space for carbon due to the combustion chamber design. Rather than just sell an engine tune-up, prove to your customer how he can have better performance and gas mileage by spending a little more money on a valve and carbon job.

Job Done Right

After the customer is sold make sure the job is done right and that all the worn parts are replaced and adjusted to the manufacturer's recommended specifications.

After the valve train has been removed and cleaned the parts should be checked for wear. Two common wear points are the rocker arms and tappets. A depression in the tappet screw or in the rocker arm, if not corrected, will

(Continued on page 86)

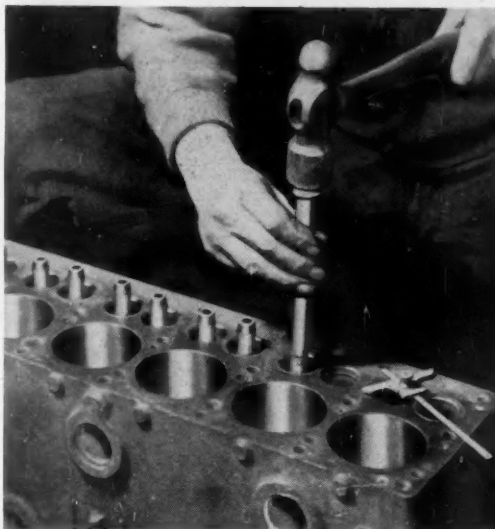
REPLACEMENT PARTS CHECK LIST

- | | |
|---|---|
| <input type="checkbox"/> valve springs | <input type="checkbox"/> points |
| <input type="checkbox"/> valve keepers | <input type="checkbox"/> condensers |
| <input type="checkbox"/> valve lifters | <input type="checkbox"/> ignition wires |
| <input type="checkbox"/> valve guides | <input type="checkbox"/> flexible lines |
| <input type="checkbox"/> valve packing | <input type="checkbox"/> fuel pump |
| <input type="checkbox"/> valve seats | <input type="checkbox"/> fuel pump filter |
| <input type="checkbox"/> valves | <input type="checkbox"/> carburetor |
| <input type="checkbox"/> gaskets | <input type="checkbox"/> spark plugs |
| <input type="checkbox"/> gasket sealers | <input type="checkbox"/> push rods |
| <input type="checkbox"/> hoses | <input type="checkbox"/> rocker arms |
| <input type="checkbox"/> hose clamps | <input type="checkbox"/> rocker shafts |
| <input type="checkbox"/> fan belts | <input type="checkbox"/> thermostats |



Note dial gauge to measure guide-to-stem clearance.

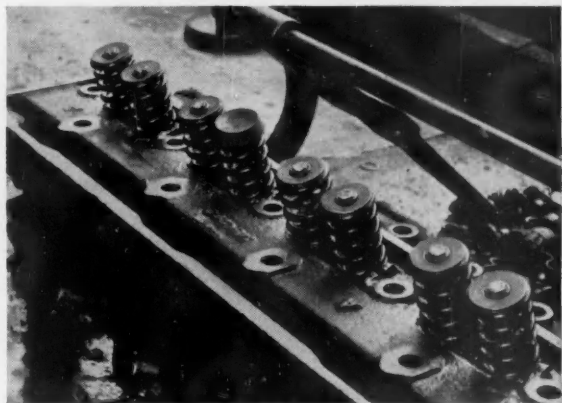
Below: Using a drift to install new valve guides.



Is a Natural

prospect material for valve and carbon job

Note rubber suction cup used to check valve's seal.

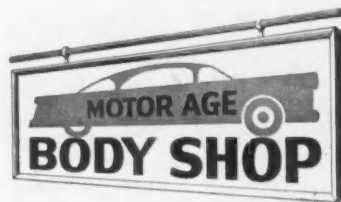


Below: After reseating operation, check roundness.





The pictures that follow show this wheel as it goes through some of the straightening procedures.



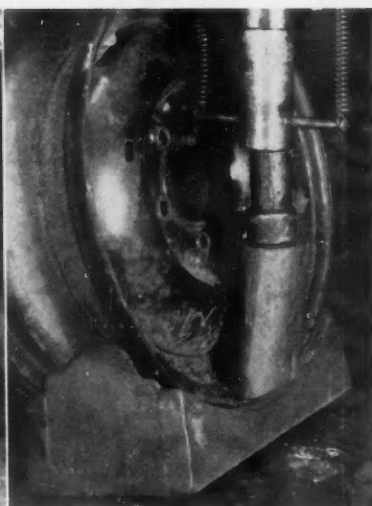
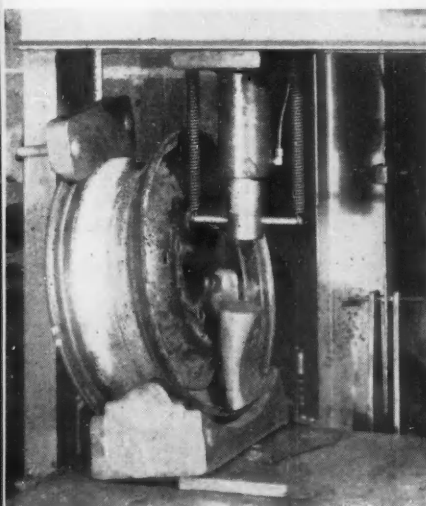
by R. C. RITTENHOUSE
Associate Editor

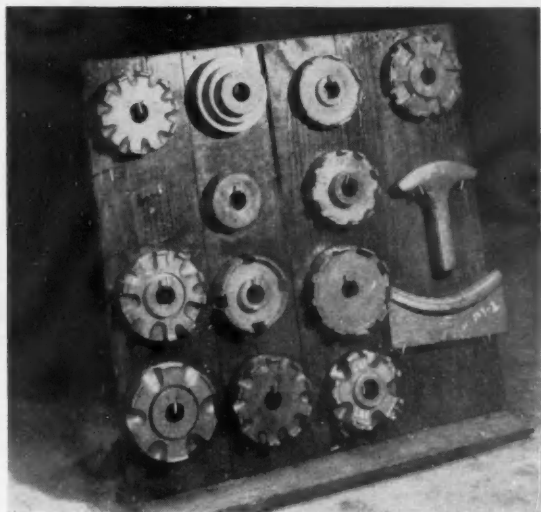
The big switch to tubeless tires has shed bright new light on the market potential for wheel work. Procedures described here could start you in an expanding business

Wheel Straightening

The wheel rests on an anvil before the rim is roughed out (left). Proper setup under pressure (right).

Straightening the center. With the proper top form in place, pressure is applied by the jack (right).





Each make wheel requires a special top form to bend the center. This board makes a handy storage place.

is Profitable

THE automotive body shop is a recognized authority on the reshaping of damaged metal. What more natural spot is there to put wheel straightening activities than in the lap of the experts?

Some statistics to show how rewarding this sideline can be to a shop include the following: It has been found that approximately 1,650,000 wheels were straightened within a year's time. This figure has been increasing at a fair rate for several years. But, since the advent of tubeless tires and the switch of most car companies to their use, the demand for this service has gained greatly, month by month.

With a little volume, it can be safely said that each wheel job will produce a net profit of about 50 per cent. A figure like this readily points up the money-making possibilities in cornering the wheel business in your area.

Fundamentals of Wheel Repair

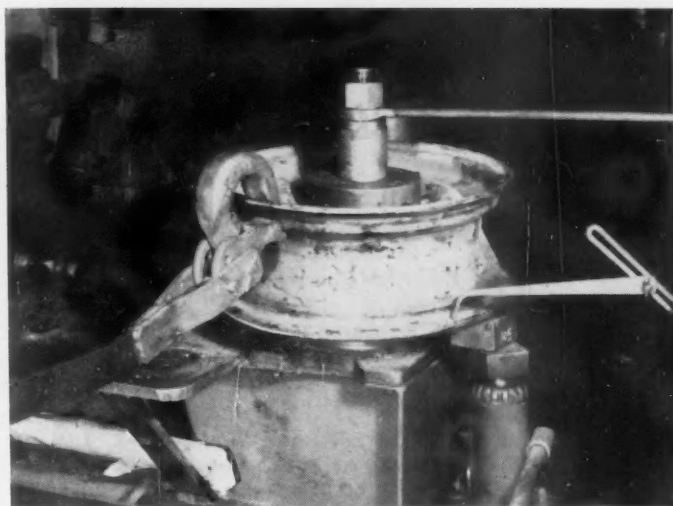
Before attempting to do this work, any service specialist should know certain basic fundamentals in the construction and repair of the wheel.

A wheel consists of two parts. In its manufacture the bolt circle and walls are stamped out in one piece. Then the rim is stamped, formed and welded or riveted to the circle.

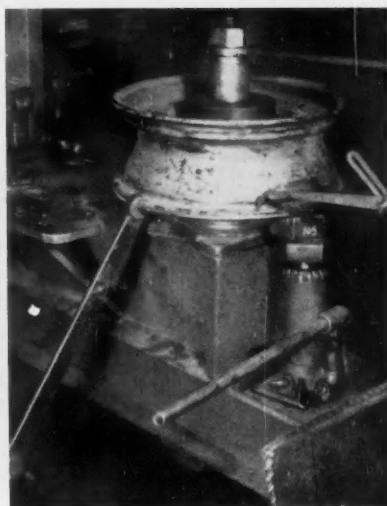
It is important to note that practically any bent wheel can be straightened. However, the job cannot be done profitably if the wheel has

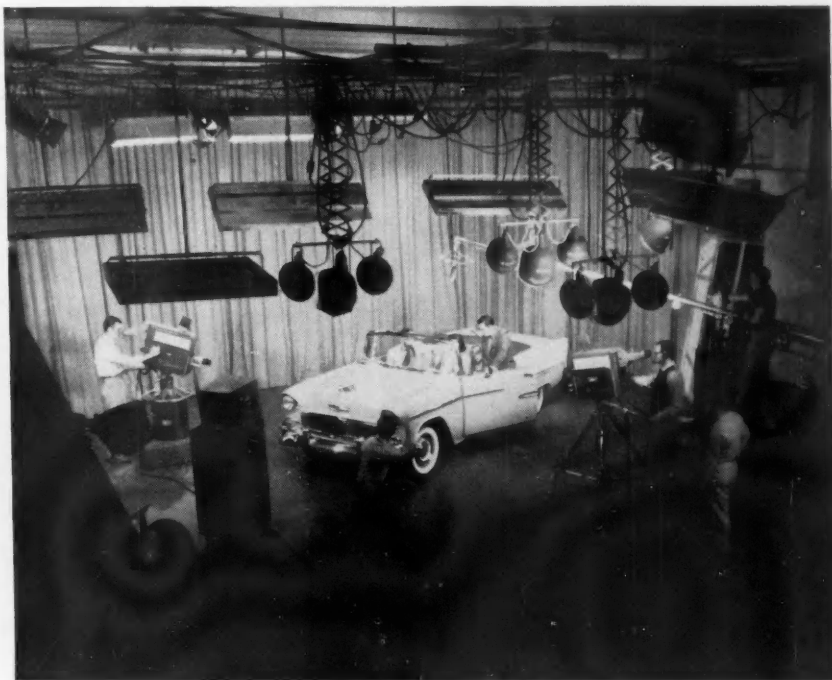
(Continued on page 110)

The big bending bar is being used to remove a local low spot in the rim. Bar at top supports center post.



A small bending bar (lower left) is used to perform finishing operations. Feeler gage checks alignment.





While car was not actually driven in studio, students go through driver operations.

Driver Training Goes Television

Title flip card is readied for camera by WQUED's Coordinator of School Programs, Mrs. Rita Levant.



Both dealer and television station join hands to promote highway traffic safety

THE Don Allen Chevrolet Co. earlier this year cooperated with a Pittsburgh television station in a pioneering effort to reduce the nation's traffic toll through the latest wizardry of electronics.

A weekly series of driver training programs, using a 1955 Chevrolet convertible loaned by the dealership, was beamed into homes and high
(Continued on page 90)



Thunderbird for '56

RESTYLED and redesigned to include a continental-type spare tire, Thunderbird 56 has three new power train options. The most powerful engine choices for Ford Motor Co.'s 1956 Thunderbird is a 312 cu in. displacement Thunderbird Y-8. This power plant is rated at 225 hp with Fordomatic transmission. Compression ratio is 9 to 1.

Secondly, there is a 312 cu in. engine rated at 215 hp with overdrive. Compression ratio here amounts to 8.4 to 1.

The third engine choice is rated at 202 hp with standard transmission. Displacement is 292 cu in. and compression ratio is 8.4 to 1.

New Ventilation System

A new ventilation system has cowl vents above the floor on each side of the car. New flipper windows on each side also help to regulate the flow of fresh air into the car.

Ford engineers have increased the luggage space in the Thunderbird by removing the spare tire and placing it inside a continental-type

(Continued on page 94)

New features include choice of three power plants, new ventilation system, and spare tire relocated in continental-type mount

Thunderbird 56 has increased luggage space which will hold three suitcases and two golf club sets.





Customers are given "radiator demonstration" to stress need for clean radiators.

Specializing In Radiator Service

Brother team in the city of Carlsbad,
New Mexico increases shop profits by
stressing either a radiator cleaning
or a new radiator core to customers



Front view of their business location in Carlsbad.

SKINNER & Skinner Garage in Carlsbad, New Mexico, sells 20 per cent of its shop customers either a radiator cleaning, or a new radiator core. The Skinner brothers, George and Harry, who established the shop in 1929, maintain that present day automotive maintenance problems differ from those of only a few years ago.

The Skinners believe that the average motorist is unaware of the importance of a clean radiator. Unless it leaks, car owners never give it a second thought. To emphasize this belief the brothers utilize a little sales promotion by refusing to accept a ring job at the shop unless they can clean the radiator too.

The philosophy here is that if a car has put the mileage on it to require new rings, it can be fairly certain, the radiator needs cleaning.

Selling efforts don't stop here, however,
(Continued on page 97)



Pop O'Neill

Except for a hard-to-start station wagon Pop might yet
be lugging his huge bundle through the shopping throng

POP O'NEILL, independent repair shop owner, rugged individualist, philosopher (and a lot of other things people might not say to his face), stared at the package thrust into his arms by the attractive young clerk. "It's too late to get this into tomorrow's delivery and we don't deliver on Saturday. If you want it for this week-end, you'll just have to take it with you," she was saying to him.

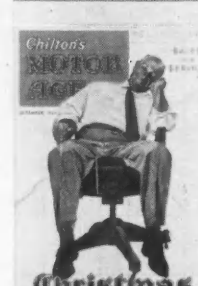
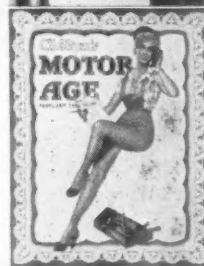
"Carry it?" Pop wailed. "I can't even get my arms around it let alone see where I'm going in this crowded place."

The girl smiled. "Then suppose I lead you to the elevator."

Pop hesitated. "How the heck did I get into this one?" he pondered. "Why does Mrs. O'Neill have to decorate with this blasted thing this week-end? Why didn't she do it earlier?" But then, married man that he was, Pop gave up and gave in. Picking up the package, he was led by the salesgirl through the maze of

(Continued on page 102)





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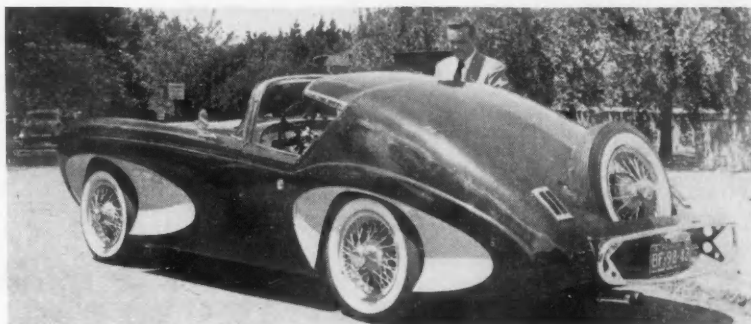
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Roof of the dream car is a retractable Plexiglas canopy which can slide in and out of the rear deck on tracks which run on nylon bearings.

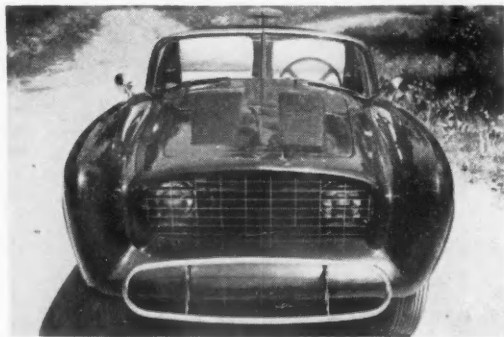


Flajole's Dream Car

Unusual both in styling and constructional techniques

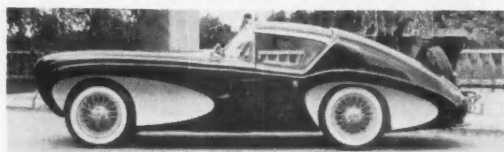
this vehicle features functional retractable car roof

By Joseph Geschelin
Engineering Editor



Front end view of car. Total cost for the all fiber glass job was \$8000 in materials, 7000 staff hours.

Below: Side view of the unusual car. The car embodies intricate compound curves in its design.



BECAUSE styling consultant William Flajole insisted on the practicality of a retractable car roof, an unusual dream car is making its debut. Flajole's dream car is unorthodox, not only in its styling ideas but in its constructional techniques. It was first on display at the Detroit Historical Museum late this past summer.

It was built by Flajole's staff of designers and modelers, directly from the renderings, bypassing the expensive stages of full-size layout and experimental body work.

Total cost for the all fiber glass job was \$8,000 in materials and 7000 staff hours, and isn't much more costly than the $\frac{3}{8}$ scale prototypes which Flajole designs for his client, American Motors. Part of the materials cost represents the modified Jaguar chassis; all other materials were purchased from standard jobbers.

As illustrated, the car embodies intricate compound curves and perforated planes not previously attempted on a fiber glass body. Even underhood fittings and hangers are molded into the fiber glass. The design was modeled first in a

(Continued on page 101)

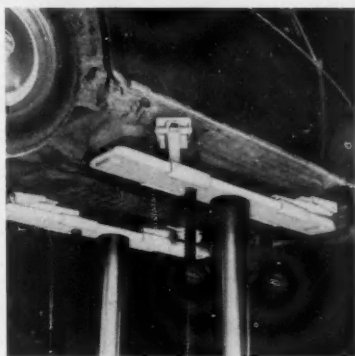
New PRODUCTS SHOW WINDOW

FOR FURTHER INFORMATION USE POSTCARD FACING NEXT PAGE

466

Frame Contact Hoist

Globe Hoist Company: This company has introduced a "Conti-



mental" model automobile hoist in its "Frame-Contact" line. Four height-adjustable contact pads (adaptors) which can be rotated 360-degrees are said to provide a means of contacting the frame or chassis of any passenger car or light truck. However, according to Globe, most U. S. cars can be handled on this hoist without adaptors. These plus a shortened and narrowed frame lifting superstructure is said to equip it to handle foreign-made cars.

467

Shop Exhauster

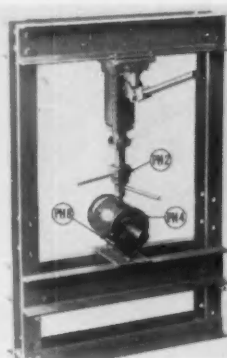
Durkee-Atwood Co.: The Dura Hose exhauster for removing fumes from shops has been marketed by this manufacturer. According to the maker the system

comes as a package ready for assembly and use. The complete package provides metal door vent, 8 ft. and 4 ft. exhaust hose tail pipe adaptors and a "Y" connector for dual exhaust systems. The Neoprene exhauster hose and accessories can be snapped on in any number of multiples and no tools or extra fittings are necessary, it is claimed.

468

Hydraulic Press

Frank N. Wood Co.: An improved hydraulic press has been



marketed by this firm. This Tru-cut press is hydraulically powered, and is equipped with attachments such as a screwdriver, puller bars, straightening blocks, pulley puller plates, bearing and gear puller plates, expander unit and V-block. According to the company, the press furnishes 20,000 lbs of pressure.

469

Windshield Divider

Car-Pak Manufacturing Co.: A windshield divider bar said to make it possible to convert any car with a one-piece bent windshield to a two piece unit has been marketed by this firm. This bar can also be used as a replacement for rusted out division bars, the maker states. Economy can be had by using salvaged halves of bent windshields and a bar as a replacement for one-piece units, according to the maker. The bar is claimed to be shake-proof, rattle-proof and leak-proof when properly installed and sealed.

(Continued on next page)

Christmas

Win This Original Painting
See Page 41

New Products Continued from Page 59

470

Lime Solvent

C-Z Chemical Co.: A liquid solvent for use in steam cleaners has been marketed by this company. Pena-Solv will keep steam cleaners free of lime deposits by holding the lime in suspension, the maker states. Said to be non-toxic and non-irritating the product may be used freely in any enclosed area. It is further claimed that the solvent softens hard water and removes soluble accumulations from all surfaces. It can be used in any type steam cleaner.

471

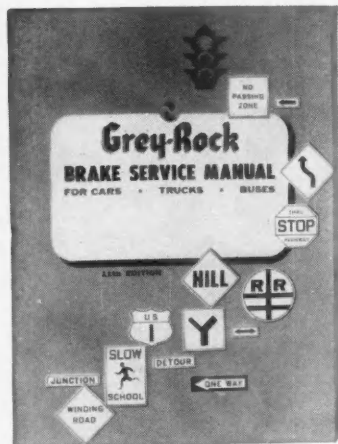
Tire Repair Plugs

Triple Seal Corp.: A complete line of rubber rivets for puncture repair of conventional and tubeless passenger, truck and farm tires has been marketed by this company. A feature of this repair unit is the insertion tool which is said to permit a simple and permanent repair without increasing the size of the puncture hole.

472

Brake Service Manual

Grey-Rock Div. of Raybestos-Manhattan, Inc.: The 11th edition of the Grey-Rock Brake Service



Manual has been published by the company. This 60 page book contains complete adjustment procedures on brakes for all passenger

cars, as well as data on brakes, brake systems and components for trucks, buses and trailers. The fully illustrated manual also includes a "trouble shooting" chart and a condensed catalog section giving lining recommendations.

473

Piston Knurler

Lisle Corporation: A new piston knurler said to feature micrometer control of piston expansion has been marketed by this firm. Said to be the lowest priced piston knurler with this adjustment, the tool is designed to knurl evenly spaced rows. The knurler will handle all sizes and types of pistons, according to the maker.

474

Plastic Gage Cases

Micro-Safe Co.: This company has marketed plastic vinyl cases



for micrometers, depth gages, welding tips, gear gages, and so on. The cases afford protection for the tools and insure against excessive calibration, extra cleaning, readjustment and loss of temper, according to the manufacturer.

475

Valve Spring Inserts

Silver Seal Products Co.: "Non-slip" valve spring inserts said to restore valve spring tension are being marketed by the maker. The manufacturer states that these inserts stay in position, stop valve

fluttering and help prevent valve burning. There are two types available, one for springs in service and one for new springs. These inserts are available for all popular passenger cars, trucks and industrial engines, the maker states.

476

Dry Battery Package

Skelly Oil Co.: A dry-charged battery has been marketed by this firm. Called "Instant-Power" the



battery is shipped and stored in sealed containers. A moisture-proof rubber washer is inserted under each vent cap which is sealed with tape. In addition, the battery is said to be heat sealed in an air-tight polyethylene container. Three individual acid containers are included to provide electrolyte for each battery cell when put into service, the maker states.

477

Tire Changer

Bishman Mfg. Co.: A mechanically operated tire changer has been introduced by this maker. An arm rotated by a hand lever removes and mounts a tire, on the machine. A tongue at the end of the arm guides the tire bead over the rim without touching air seals, wheel weights or white sidewalls, according to the manufacturer. A three point chuck centers any wheel from 14 to 17 inches, it is claimed. One model has a built-in double bead breaker, a second model is a tire changer only and a third includes a floor type bead breaker.

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INQUIRY CARDS

The Inquiry Card—How It Works

EACH month Motor Age's New Products Show Window describes dozens of fast-moving items and money and time saving equipment from the country's leading manufacturers of dependable automotive products.

When you want more free information on any of these products, simply mark a circle around the same number on the postcard as appears under the item described. You may circle as many items as you wish. Use either or both cards. Separate information will be sent to you on each item. Be sure to give your full name and address.

New Literature

478. Welding Catalog

Uniflex Cable Div. United Metal Craft Co.: Detailed tables to assist in the selection of welding cable in terms of adequate capacity, current flow and cable lengths are featured in the catalog now available through this company. The catalog also carries a department devoted to tips on reducing welding costs in addition to an illustrated section covering Uniflex products.

479. Refinishing Specifications

Arco Company: Step-by-step descriptions of refinishing procedures are available through

(Continued on next page)

Postcard valid for 90 days only.

Frank P. Tighe, EDITOR MOTOR AGE
P. O. Box 76, Village Station, N. Y. 14, N. Y.

12/55

Please send me further information on the New Products, the code numbers of which I have circled below.

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|---------------------------|---------------------------|----------------------------|
| 466. Frame Contact Holst | 475. Valve Spring Inserts | 482. Vehicle Lighting Code |
| 467. Shop Exhauster | 476. Dry Battery Package | 483. Electric Tool Catalog |
| 468. Hydraulic Press | 477. Tire Changer | 484. Flashing Flare |
| 469. Windshield Divider | 478. Welding Catalog | 485. Seat Cover Cleaner |
| 470. Lime Solvent | 479. Refinishing | 486. Radio Antennas |
| 471. Tire Repair Plugs | Specifications | 487. Chemical Ice |
| 472. Brake Service Manual | 480. Paint Sprayer | Remover |
| 473. Piston Knurler | Catalog | 488. Clear Seat Covers |
| 474. Plastic Gage Cases | 481. Headlight Chart | 489. Hot Shot Device |
| | | 490. Trailer Hitch |

Your Name Your Title

Your Company

Your Business: Wholesaler.....Repair Shop.....Car Dealer.....

Address (Street & No.) (City) (Zone) (State)

Postcard valid for 90 days only.

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| 472. Brake Service Manual | 480. Paint Sprayer | Remover |
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| 474. Plastic Gage Cases | 481. Headlight Chart | 489. Hot Shot Device |
| | | 490. Trailer Hitch |

Your Name Your Title

Your Company

Your Business: Wholesaler.....Repair Shop.....Car Dealer.....

Address (Street & No.) (City) (Zone) (State)

New Products

Continued from Page 61

this company in the form of three specification sheets. One discusses baked enamel refinishing, the second is for air-dry enamel and the third for lacquer refinishing. Each of the sheets shows complete preparation procedures. Finishing steps for various grades of work are listed numerically, followed by instructions for use of materials. In addition, the specification sheets cover common problems encountered in paint shops and tell how to overcome them.

480. Paint Sprayer Catalog

M & E Manufacturing Co.: A 28-page catalog describing this company's line of spray painting equipment has been published. The catalog is said to include the former Kellogg-American Micro-Spray gun line. A complete range of guns, booths and accessories are illustrated and listed for easy reference. Featured in the catalog is the company's new Infra-red drying oven.

481. Headlight Chart

Auto Lamp Manufacturing Company: The 20 in. x 28 in. chart available through this firm indicates replacement headlight assemblies for General Motors, Chrysler and Ford Products. The chart also contains original manufacturers' part numbers, door numbers and Pathfinder catalog numbers for various types of complete assemblies. Exploded views of the lights identify parts and simplify installation. Available free.

482. Vehicle Lighting Code

R. E. Dietz Company: An illustrated listing of official I.C.C. Motor Carrier Lighting Regulations for trucks, buses, trailers, and combinations has been published by this manufacturer. In addition, the firm has made available illustrated sheets which list the new motor vehicle laws on turn signal equipment, effective January 1, 1956, in Montana, Utah and Illinois.

483. Electric Tool Catalog

Porter-Cable Machine Company: A 25-page 1956 catalog describing 52 portable electric tools and kits with over 400 accessories is now available through this company. This book is said to include 150 pictures of tools and their uses with complete specifications and prices. It is offered free of charge.

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Sec. 349, P. L. & R.
New York, N. Y.

NEW ACCESSORIES

484 Flashing Flare

U-C Lite Manufacturing Co.:
The Flashing Flare Beacon mar-



keted by this firm features a flashing bulb covered with a red lens of molded plastic. Started by a push-button switch, the flare is powered by a 6-volt lantern battery and is housed in a waterproof steel case, according to the maker. Fresnel lenses are also available in blue, green, amber, and clear. The unit is said to fit into the glove compartment of a car, and weighs 39 ounces complete.

485 Seat Cover Cleaner

Cecil H. Jarrett Co.: A seat cover cleaner has been marketed by this manufacturer. The product is applied to the cover material with a cloth. Plasto seat cover cleaner cleans and conditions leather and plastic but is not recommended for suede or Morocco leather, the maker states.

486 Radio Antennas

Snyder Manufacturing Co.: Colored automobile radio antennas to

complement new car color combinations have been marketed by this maker. According to the company, this line of fiberglass antennas can be installed with any make radio and on any car. Available in red, green and blue, the units are said to be break, corrosion and fade proof. They are installed on the top cowl, the front, or on the rear deck, according to the maker.

487 Chemical Ice Remover

Walton-March: Traction under ice or snow conditions is said to be



provided for trucks and cars by spreading "Ice-Foe." The chemical pellets create heat upon contact with moisture and melt ice many times faster than salt, the maker states. The soluble chemical leaves no white rings on the driveway and will not damage tires, concrete, asphalt or shoes and is harmless to grass, it is stated.

488 Clear Seat Covers

Howard Zink Corp.: A clear, heavy-duty plastic seat cover that does not hide the car upholstery has been marketed by this com-

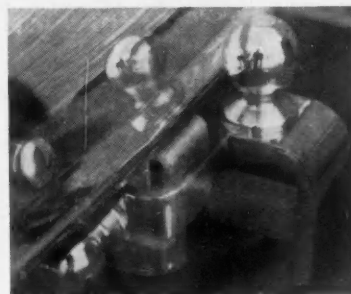
pany. Called Clear-Tex the covers have one seam on the back rest, allowing the covers to be made in one piece of plastic, the maker states. The covers are said to protect upholstery from stains and clean easily with a damp cloth.

489 Hot Shot Device

Jan-Scott Sales Co.: Cold or wet car engines are said to start quickly with this automobile accessory. Kar-Start provides extra spark when the starter is pressed and is installed by clipping the leads or mounting it on the firewall, according to maker. It is said that the device will not damage the spark plugs or distributor.

490 Trailer Hitch

Specialty Engineering Inc.: A trailer hitch for automobiles which is said to retract and lock under the car's bumper (see double exposure photo) has been mar-



keted by this firm. According to the maker, this retractable feature avoids damage to other cars and leaves license plates unobstructed. The Retracto Hitch can be left permanently on the car and will fit most late cars, the maker states.



BODY SHOP TIPS

are worth

\$7.50

If you've developed an idea that has helped you to do body and fender work or painting better or faster, it may be worth money. Jot down the idea and, if necessary, make a rough sketch. Sometimes a snapshot will help. Just make the description of your BODY SHOP TIP clear, and if it is used, you'll receive a check for \$7.50.

Homemade Stand Pipe Saves Wash Rack Hose

Shut offs on water hoses around the wash rack cause tremendous pressure and ruin millions of dollars worth of hose annually. To cure this I put a tee behind the faucet and 3 or 4 inches of iron pipe (capped) straight up. This acts as an air chamber or shock absorber to prevent further hose breakage. *M. E. Kerwin, 14 S. Charter St., Madison 5, Wisconsin.*

Small Scrubbing Brush Is Handy Sander Block

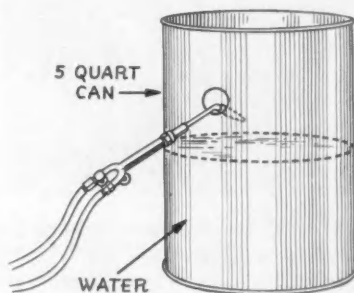
By using a small size scrubbing brush, from the dime store, for a sander block you have a handy duster at the same time. The brush does not leave annoying lint as does a cloth. *E. A. Stowell, 515 E. Oak St., Boscobel, Wis.*

Plumber's Plunger Makes Excellent Dent Remover

Minor dents may often be removed from car fenders and bodies with a "plumber's friend," that is, a rubber cup on a stick which plumbers use as a plunger to open drains. Place the plunger over the depression and pull it back with a quick yank. *Henry Josephs, Box 22, Gardenville, Penna.*

5 Quart Can Makes Handy Torch Holder

Very often it is necessary for a body man to step away from the job for a few seconds when he is



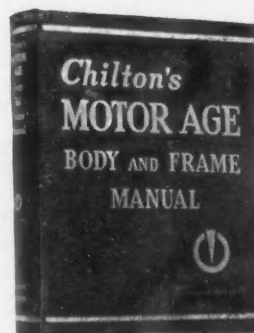
welding or soldering. There is always the problem of what to do with the lit torch. Times is wasted if he must shut it off each time he leaves the work. To solve this problem I cut a 2 inch hole in the side of a clean 5-quart can (about 5 inches from the top). This can, half filled with water, serves as a very handy holder for a burning torch. *M. H. Puisifull, Jr., Main Street Motors, 253 S. Main St., Columbiana, Ohio.*

Drop Cloths and Magnets Mask Cars for Tu-toning

Ordinarily a lot of masking tape and paper is used when a car is being prepared for tu-toning. We eliminate the need for this by covering most of the car with inexpensive plastic painter's drop cloths. These cloths are held in position with several small magnets. One strip of paper is placed along the drip rail and the car is completely masked in a few minutes time. *C. E. Sharp, 200 Alabama, Mexico, Mo.*

Newspaper Wrapping Makes Steel Wool Easier to Cut

To cut steel wool easily, wrap it in newspaper first, and then cut it with tin shears. This wrapping keeps the loose ends from tangling as you cut and helps smooth cutting. *E. A. Stowell, 515 E. Oak St., Boscobel, Wis.*



Other valuable information of the type presented each month in **The BODY SHOP** is readily available in Chilton's Motor Age Body and Frame Manual.



John O. Gantner, Jr., President of Gantner of California, reveals why

"She always has the last word!"

"They say a woman will always have the last word. It's certainly true when she shops for a swimming suit!

"She waits till the last possible minute, and insists she get the 'last word' in style. Pressure on stores is terrific. If 'hot' styles run out of stock, those sales are gone forever.

"But our retail accounts know they can depend on Gantner.

"Gantner styles can be restocked to any store in the country in a few hours, *while the ads are running*. Not a moment is lost — not a sale is lost — thanks to Air Express!

"And one last word — about costs. Specifying Air Express can save you money, too. 15 lbs. from San Francisco to Chicago, for example, costs \$10.91. That's \$1.09 less than any other complete air service!"



Air Express



GETS THERE FIRST via U.S. Scheduled Airlines

CALL AIR EXPRESS . . . division of RAILWAY EXPRESS AGENCY

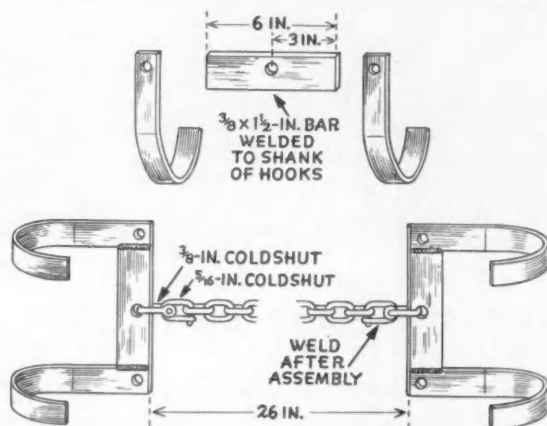
\$25 ShopKinks \$7.50

TIME AND WORK SAVING IDEAS ON CARS AND TRUCKS CAN PAY OFF. SEND YOURS IN NOW!

If you have an original idea for a special tool, a short cut on a job or any trick of value to others, write it down and if necessary make a rough sketch. Just make it clear. Send it to Motor Age. If your Kink is used it may bring you \$7.50 or \$25. All entries become the property of the Chilton Company. Because of the quantity of entries sent in, none can be returned.

\$25

Makes Low Cost Engine Hoist from Old Clamps



This tool will remove the engines of 1954-55-56 V-8 Fords. The hooks are made from hold down shackles used in new car railway shipments. Get 4 clamps and cut $4\frac{1}{2}$ inches from one side of each. Pair them off and weld a length of strap iron between each set. Drill a $\frac{1}{2}$ inch hole at the center of both strips of strap iron. Connect one set of hooks at each end of a 26 inch length of chain with cold shuts and weld. *Andrew Foglia, Neil Motor Co., Box 188, Woodland, Wash.*

Old License Plates Make Good Windshield Scraper

When removing old license plates and installing new ones, I always wash and fold the old plate in half. Handing it to the owner, I explain to him that it is the best windshield scraper he could use. The metal is soft and will not scratch, yet the edge is sharp enough to do the work. *J. Reinhart, Reinhart's Texaco Service, 2925 Brownsboro Rd., Louisville, Ky.*


Hole Drilled in Bearing Groove Stops Leak

Now and then a Chevrolet or Pontiac comes into our shop with a leaky rear main bearing. To overcome this I drill a $\frac{1}{16}$ inch hole in the lower cap groove through the bearing notch. This permits the oil to return to the pan. On oil pressure systems I drill a $\frac{1}{32}$ inch hole in the groove. I've never had one of these jobs come back with any further problem of leaks or lack of oil to the bearing. *Oskar Senfer, Westerville, Ohio.*

Short Cut for Timing Chain Replacement

I have a method of installing timing chains on Oldsmobile V-8 engines that saves considerable time on the job. After the radi-
(Continued on page 68)

U. S. Patents 2,635,022
and 2,605,925



increasing
its lead
every day!

New **PERFECT CIRCLE** type "98" chrome oil ring!

Of the 6,474,531 U.S. passenger cars produced from Jan. 1 through Oct. 29 more than half* were equipped with the new Perfect Circle type "98" chrome oil ring!

Better than any other oil ring for new high-compression, high-vacuum overhead valve engines!

- Uniform pressure on entire circumference!
- Multiple tiny springs exert both side and radial pressure!
- Provides maximum oil drainage!
- Constant flexing retards carbon accumulation!

NOTE: Perfect Circle's 2-in-1 Chrome Set with the new type "98" Chrome Oil Ring is now available for replacement in most late model and many older model cars. Will be available for additional older models as soon as production facilities permit.

*52% were new Perfect Circle Type "98" Chrome Oil Rings.

48% were all other oil ring types combined, including other Perfect Circle oil ring types.

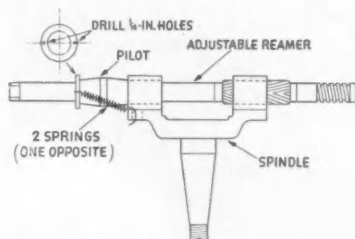
Perfect Circle Corporation,
Hagerstown, Indiana
The Perfect Circle Co., Ltd.,
Toronto, Ontario

Shop Kinks Continued from Page 66

tor, fan and front motor mounts are removed I jack up the engine 3 or 4 inches. Then I loosen all of the oil pan bolts and let the pan drop slightly. This makes it possible to remove and replace the timing case cover without necessitating oil pan, crossover pipe and starter removal. *Bert Gordon, Reeds Automotive Service, 4550 1/2 Sepulveda Blvd., Sherman Oaks, Calif.*

Holder for Reamer Helps Speed Axle Housing Job

Ordinarily it's a tough job to ream front axle bushings because



the pilot of the reamer must be held with one hand and turned with the other. I've made the job easier by drilling two small holes into a flat washer and then slipping it over the reamer shaft. I then insert the end of a spring into each hole and connect the other ends to the spindle. These parts keep the pilot in position leaving both hands free to operate the reamer. *Herbert Engel, R. D. 1, Bechtelsville, Pa.*

Homemade "Raft" Makes Radiator Testing Simple

The unit I have devised for raising and lowering radiators in a testing tank eliminates the need for hoist rigging. My device is made up of a partially inflated 6:00-16 tube and several slates nailed together to make a platform. The tube is dropped on the water and the platform is placed on top to protect it. A radiator can now be positioned on the platform and pressed under the water to check for leaks. Release of pressure will

allow it to return to the surface for soldering. *Ferrel Cain, 315 Academy St., Geneva, Ala.*

"Jumps" Dead Cell to Start Twelve Volt Car

Here is a timesaving trick for starting a car with a twelve volt system that has a "dead" battery. Remove the battery cell caps and hit the starter. It will be noted that the dead cell will boil. If this cell is jumped with a short piece of heavy wire the car will start on the remaining ten volts. *John R. Dick, Jr., Rehoboth Garage, Rehoboth Beach, Delaware.*

Length of Copper Tubing Helps Replace Bearings

The device I have made speeds up the replacement of ball bearings in coaxial power steering units. The tool is a one foot length of 3/8 inch copper tubing with one end pinched shut and the other spread slightly. Instead of replacing the ball bearings one at a time all of them are placed into the tube and fed quickly into position. *Del Smith, 318 Berkeley, Santa Ana, Calif.*

Idea Speeds Installation Of Truck Transmissions

While installing the transmission of an International truck it is often difficult to keep the throwout bearing in its proper position. We've licked this difficulty by putting rubber bands around the fork bolt and the bearing hub. These rubber bands hold the bearing in place while the transmission is being inserted. *Marcus Hendricks, Nace's Service Station, Broad & County Line Rd., Souderton, Pa.*

Length of Garden Hose Locates Engine Miss

We have found it a little difficult to pin point a cylinder miss on some late model cars because the

engines run so quietly. I connect a length of garden hose to the exhaust pipe and hold the other end near my ear. This transmits every engine sound and helps me spot any change in performance when shorting the plugs. *H. H. Kinder, Hanks Garage, General Delivery, Cleveland, Texas.*

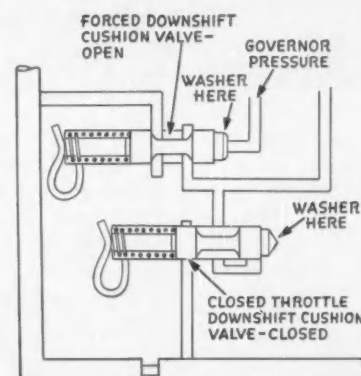
Editor's Note: Caution is advised while using this method of trouble-shooting.

Discarded Axle Helps Remove Outer Bearings

On occasion we have trouble removing the outer bearing of the rear wheel on full floating axles. To make this job easier I begin by cutting about 9 inches off a discarded axle (from the outer end). Then I remove the snap ring from the inside of the wheel. Next, the stub of the axle is turned around with the teeth to the outside and it is used to punch the bearing, race and spacer out of the hub. *C. Vernon Nelsen, Ryal Miller Chevrolet Co., Norfolk, Nebraska.*

Eliminates Powerglide Clicking With Washers

Occasionally a 1955 Chevrolet with Powerglide transmission develops a clicking noise at 12 to 20 miles per hour. I find that by installing a Neoprene washer in the valve body ahead of the forced

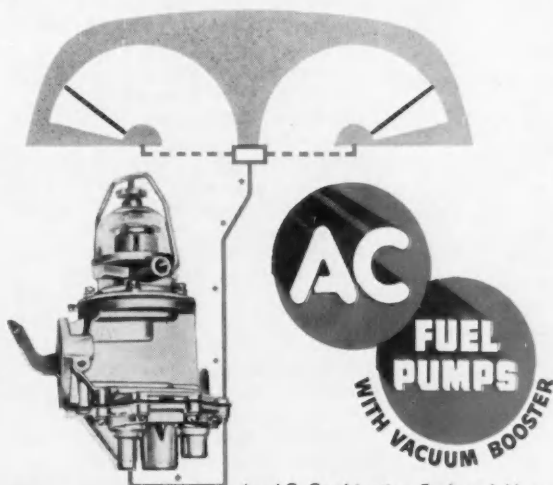


down shift valve and one ahead of the closed throttle cushion valve this noise will be eliminated. *T. P. LaRoche, Moore's Incorporated, P. O. Box 881, Greenwood, South Carolina.*

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turns
stormy
weather



into extra sales...



An AC Combination Fuel and Vacuum Pump boosts fuel to engines, boosts wiper action, and boosts sales for you!



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Vacuum power comes into its own during bad driving weather.

Motorists everywhere turn to Mr. Vacuum for help in keeping windshields clear of rain and snow. And that means extra sales for you. It means a "plus"—an extra benefit you can offer your service customers—because the AC Combination Fuel and Vacuum Booster Pump supplies extra power to keep wiper action steady and keep windshields clear.

Mr. Vacuum assures more vision for your customers, more profits for you!

STANDARD FACTORY EQUIPMENT ON MORE NEW VEHICLES THAN ALL OTHER MAKES COMBINED!

Up-To-Date Body Parts Price List

1955 Various Models

Plymouth

1592764—Front Door Shell, R.—4-dr.	53.50
1592772—Rear Door Shell, R.—4-dr.	53.50
1593316—Outer Door Handle, R.	2.80
1593246—Door Window Regulator Handle	1.60
1597336—Door Vent. Handle, front, R. ....	.85
1593246—Quarter Window Regulator Handle	1.60
1593512—Upper Front Door Hinge, R.	2.95
1593518—Lower Front Door Hinge, R.	2.95
1591578—Front Door Lock, R.	3.80
1592673—Remote Control Link, front ....	.45
1591635—Remote Control Link, rear ....	.35
1608936—Remote Control, front, R.	1.10
1608940—Remote Control, rear, R.	1.05
1579545—deck lid	48.50
1593907—Deck Lid Lift....	2.85
1579206—Deck Lid Hinge, R.	4.85
1579306—Door Garnish Mldg., front, R.—4-dr....	7.85
1593264—Door Garnish Mldg., rear, R.—4-dr....	8.25
1608729—Instrument Panel, upper	25.50
1579981—Instrument Panel, lower	16.25
1544360—Wheelhouse Panel, R.	15.25
1591208—Cowl Side Panel, R.	21.50
1579809—Cowl Upper Panel —4-dr.	48.25
1591353—Dash Panel	16.65
1591106—Rear Quarter Panel, R.	6.25
1609336—Rear Quarter Outer Panel, R.	49.75

Pontiac

518639—Hood Assy.	49.75
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Pontiac—continued

520074—Hood Hinge, R.	4.00
519807—Hood Ornament Face	3.50
519309—Hood Top Ornament	4.90
519565—Hood Top Mldg., R.	6.50
520005—Radiator Splash Apron	6.90
518640—Front Fender, R.—prime	39.50
518889—Front Fender Extension, R.	3.25
518949—Front Fender Skirt, R.	11.75
520620—Front Fender Skirt, R.—w/a.c.	11.75
519237—Front Fender to Radiator Brace	3.35
4210503—Front Door Shell, R.—2511, 63	59.10
4210505—Rear Door Shell, R.—2562	62.75
4156606—Front Door Upper Hinge Box, R.	1.95
4156602—Front Door Upper & Lower Hinge Strap, R.	2.35
4156606—Front Door Lower Hinge Box, R.	1.95
4645041—Rear Door Upper Hinge	2.90
4637079—Rear Door Lower Hinge, R.	5.25
4631670—Front Door Lock, R.	5.85
4631672—Rear Door Lock, R.	5.85
4644800—Front Door Ventilator Assy., R.	21.75
4156637—Door Ventilator Frame Assy.	1.95
4647006—Front Door Ventilator Regulator, R.	3.25
4648805—Front Door Ventilator Regulator Handle ...	2.00
4645427—Front Door Window Low Sash Chan., R.—2511 ....	.95
4649037—Front Door Window Glass—2511	11.75

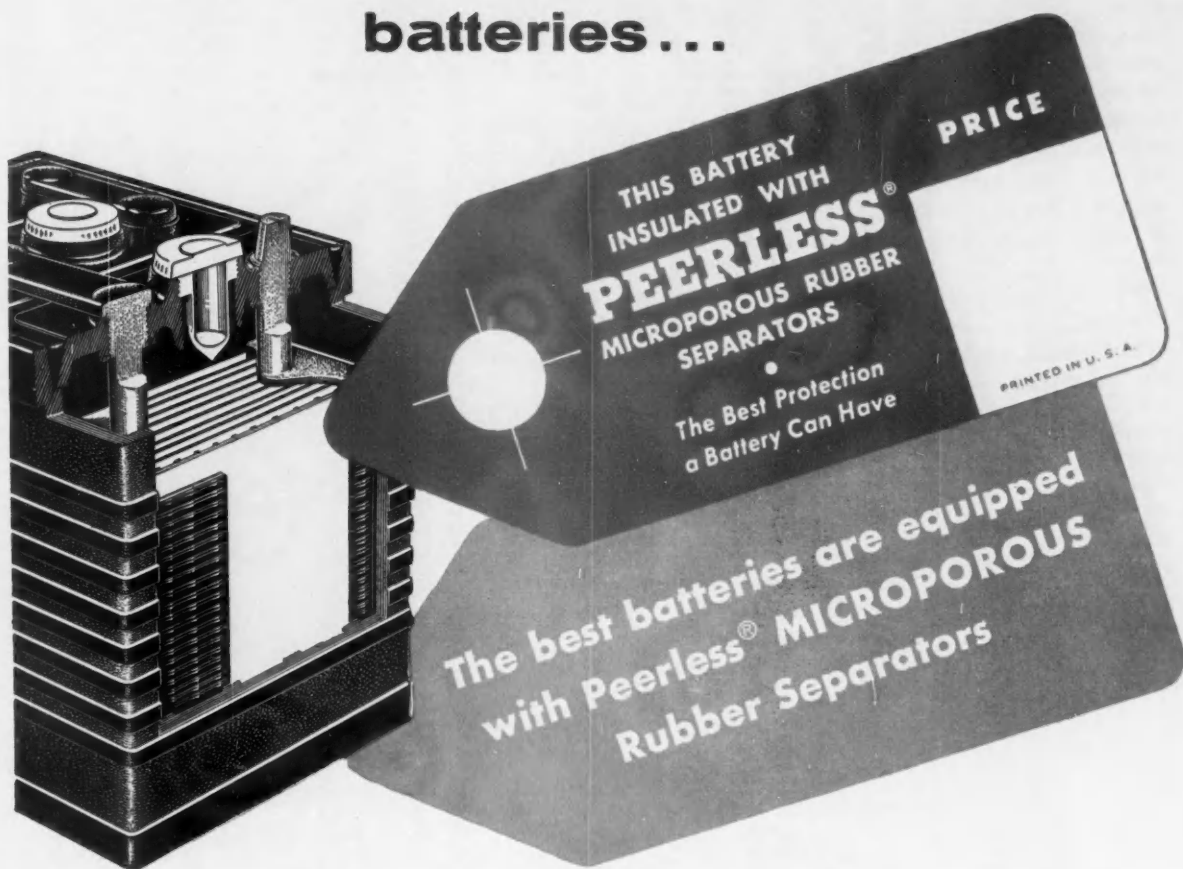
Studebaker

308156P—Front Fender & Apron, R.—16G, 6H	43.00
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Studebaker—continued

308610P—Front Fender & Apron, R.—16G, 6H, w/wraparound wdshd.	43.00
308448P—Rear Fender, R.—W-F-Y	24.75
310406P—Rear Fender, R.—C-K	24.75
308243—Rear Fender Gravel Deflector, L.—W-F-Y	2.00
308234—Rear Fender Gravel Deflector, L.—C-K.	1.55
308084P—Stripped Hood Top, Exc. C-K	39.50
308063P—Stripped Hood Top, C-K	41.00
303068P—Hood Hinge & Links, R.—C-K	1.00
284505P—Hood Hinge Spring ....	.20
308147P—Front Fender Lower Panel, exc. C-K.	16.00
310202P—Front Fender Lower Panel, C-K	14.50
308071WP—Radiator Center Grille	28.00
309428W—Radiator Side Grille, R., exc C-K	15.95
309432W—Radiator Side Grille, R., C-K	15.95
308700—Grille Center Ornament	N.A.
308093—Radiator Upper Air Deflector, exc. C-K	3.50
308223—Radiator Upper Air Deflector, C-K	3.25
536851—Instrument Panel Bezel & Emblem, 16G6....	14.65
536852—Instrument Panel Bezel & Emblem, 16G8	15.00
536853—Instrument Panel Bezel & Emblem, 6H	15.50
535934W—Front Bumper Face Bar	25.50
535967P—Front Bumper inner supt. exc. C-K.	4.65
536136P—Front Bumper outer supt., R.—C-K	2.85
536135P—Front Bumper inner supt.—C-K	4.50
535970P—Front Bumper outer supt. R., exc. C-K	2.50

Let this tag help sell your premium line of batteries...



You slip this eye-catching salesman onto the battery post easily and quickly.

- It dresses up the battery.
- Tells the customer instantly that the battery has the best insulation available. It can also be used as a price tag.
- Gives the retail sales person more ammunition to sell premium grade batteries.

- THE TAG REMINDS THE CUSTOMER OF THE ADVERTISEMENTS OF Peerless Separators HE HAS SEEN IN *THE SATURDAY EVENING POST*.

Send today for your free supply of these tags. They announce, in the quickest, strongest way, that *the batteries you sell are loaded with protection and long life.*



UNITED STATES RUBBER COMPANY
BATTERY SEPARATOR SALES DEPARTMENT • ROCKEFELLER CENTER, NEW YORK 20, N. Y.

1955 New Passenger Car Registrations by Makes by States*

STATE AND MONTH	Buick	Cadillac	Chevrolet	Chrysler	De Soto	Dodge	Ford	Hudson	Kaiser	Lincoln	Mercury	Nash	Oldsmobile	Packard	Plymouth	Pontiac	Studebaker	Willis	Misc. Dom.	Foreign	Total
Alabama	Sept. 705	80	2487	123	71	187	1654	20		14	259	38	520	15	599	458	61	1		7	7,339
9 Mos. 6491	834	19638	1198	787	2176	18960	336	1	251	3221	566	4823	270	6891	5330	765	28	3	156	72,745	
Arizona	Sept. 372	75	917	76	35	131	882	28	3	9	196	46	242	28	301	200	104	5		41	3,981
9 Mos. 2540	537	5840	583	318	1041	5878	200	11	120	1202	389	1688	220	2338	1674	520	29		204	25,102	
Arkansas	Sept. 262	36	1082	35	26	88	1026	19		8	201	17	298	13	353	220	37			5	3,706
9 Mos. 2852	517	9912	566	427	1339	10676	236	4	136	1960	263	3020	153	3835	2713	483	32	1	25	39,150	
California	Sept. 8734	1182	13618	1102	901	2533	11306	319		354	977	877	3474	318	4274	5084	984	44		1421	63,481
9 Mos. 66222	13561	100773	10119	7371	18452	95515	3319	113	2979	35694	7459	40359	3376	37158	37542	8762	411	13	13675	502,874	
Colorado	Sept. 450	147	1809	140	86	283	1490	46		35	325	95	526	51	460	393	79	1		28	6,254
9 Mos. 3792	1035	11537	1342	752	1907	11130	424	5	288	2693	837	3683	349	3750	3365	714	21	2	212	47,838	
Connecticut	Sept. 930	144	2169	259	117	379	1583	63		43	329	207	866	91	1056	678	126	5		172	9,217
9 Mos. 8110	1742	25880	2569	1311	3379	15830	770	14	413	3702	1766	7006	794	8493	6133	1258	80		1439	80,689	
Delaware	Sept. 209	34	543	40	23	62	469	1		12	80	9	142	4	211	152	12	1		10	2,014
9 Mos. 1771	320	4089	281	242	615	4100	14	1	90	762	114	1091	75	1712	1105	182	15	2	78	16,639	
Dist. of Col.	Sept. 374	69	755	75	52	113	459	11		6	108	31	284	35	367	311	31	1		27	3,107
9 Mos. 2800	680	5982	644	554	1002	4644	111	6	110	1130	278	2408	203	3365	2407	262	10		247	26,511	
Florida	Sept. 1510	459	4875	314	184	591	3946	85		85	941	144	1512	107	1107	1103	186	11		128	17,150
9 Mos. 12822	3413	34414	2804	1747	4531	32907	798	9	806	7109	1272	11396	855	10943	9463	1793	135	8	1194	138,219	
Georgia	Sept. 1061	136	4066	184	84	426	2732	20		29	494	85	839	49	980	996	143	9	1	33	12,367
9 Mos. 9642	1528	30807	1689	1110	3979	29523	184	21	320	5507	825	8178	506	5236	9440	1586	75	22	242	114,420	
Idaho	Sept. 216	46	502	60	34	78	403	29		7	145	30	179	14	184	144	54	2		6	2,133
9 Mos. 2019	368	4076	539	356	924	3440	239	5	98	1039	373	1497	155	1527	1481	500	36		36	16,708	
Illinois	Sept. 4167	910	8674	715	410	1248	732	404	1	176	1924	550	3771	230	3082	2623	380	9		101	36,807
9 Mos. 41964	8814	76171	8672	5737	13181	67443	4701	41	1781	18841	5942	34888	2903	35647	24848	4649	302	53	813	357,469	
Indiana	Sept. 2206	351	5083	346	310	721	4809	110		51	840	274	1818	107	1659	1540	370	14		59	20,719
9 Mos. 18618	3013	37496	3923	3550	7305	36576	1140	20	631	7744	2452	13868	1277	15896	13118	4723	180	3	279	77,820	
Iowa	Sept. 818	146	2832	182	99	377	2147	45		26	492	99	734	61	746	554	128	5	1	22	9,515
9 Mos. 7557	1234	21515	1888	1182	3420	19788	527	13	320	4165	1019	6279	535	7286	5824	1316	48	7	135	84,048	
Kansas	Sept. 773	135	2275	152	83	325	2080	51	1	31	484	136	646	36	648	714	100	2	1	10	8,683
9 Mos. 6778	1251	18371	1564	1020	2859	17704	584	15	288	3714	1359	5476	496	6464	6852	1012	62	5	114	75,934	
Kentucky	Sept. 856	85	2283	92	84	236	1650	32		13	315	56	638	37	627	579	83	6		10	7,632
9 Mos. 6659	785	16949	1058	801	2465	15683	281	8	127	2873	648	4702	342	5888	4442	830	62	2	40	64,445	
Louisiana	Sept. 769	118	2859	137	61	256	2403	27		32	429	56	894	40	760	763	120	6		14	9,765
9 Mos. 5811	1062	19635	1127	802	2352	12022	178	8	243	3229	531	6218	369	6576	6251	1238	46	1	135	76,836	
Maine	Sept. 312	60	934	73	58	162	854	36		2	146	101	205	21	398	247	63	4	2	39	3,533
9 Mos. 2095	348	6216	473	461	1048	5141	285	6	108	1094	568	1376	174	2836	1806	460	52	7	203	24,755	
Maryland	Sept. 1020	185	3022	199	152	414	2194	36	1	38	494	87	953	108	1297	821	163	3	2	33	11,220
9 Mos. 8702	1403	22579	1782	1716	3792	19742	474	7	322	4098	893	6679	653	10577	6626	1402	55	2	362	91,866	
Massachusetts	Sept. 1789	217	4293	318	273	606	3216	128		89	635	408	1877	110	1696	1319	176	8		179	17,337
9 Mos. 14789	2426	29714	3453	2724	5371	31090	1160	19	651	8976	3545	14083	1011	15291	10440	1548	105	8	1468	144,870	
Michigan	Sept. 5514	573	12310	649	493	1631	10077	110		175	2364	393	3880	246	3413	3865	296	13	5	94	46,101
9 Mos. 47055	8201	92331	7341	5726	18823	89529	1687	29	1647	20957	3881	30745	2668	34414	28851	3031	214	9	695	395,742	
Minnesota	Sept. 1758	195	3266	171	74	217	1065	105		43	744	174	1050	98	1074	734	205	1		83	13,444
9 Mos. 9309	1752	22415	2089	1733	3833	23809	721	12	337	4704	1214	9514	852	8517	6421	1808	85		130	99,255	
Mississippi	Sept. 451	83	1661	65	75	188	1466	7		19	347	22	433	24	620	471	74	3		4	6,013
9 Mos. 3788	616	11492	677	618	1533	11032	153	7	140	2014	233	2786	203	4805	3251	548	27		22	43,945	
Missouri	Sept. 1483	318	4416	240	252	516	3942	48	3	69	893	182	1390	73	1785	1482	185	6		25	17,308
9 Mos. 11858	2164	31656	2307	2318	4307	31201	407	23	467	6645	1545	10896	660	15150	11012	1398	86	10	257	134,810	
Montana	Sept. 165	47	648	58	35	113	713	23		7	157	26	222	27	213	176	79			13	2,722
9 Mos. 1507	391	4777	527	307	1006	4499	271	6	102	990	293	1577	229	1651	1490	492	28	1	54	20,198	
Nebraska	Sept. 623	106	1484	111	40	218	1454	23		18	301	55	402	46	465	306	53	4		1	5,706
9 Mos. 5180	1076	10868	1076	686	1810	11888	201	5	168	2869	440	3437	307	4114	3132	690	44		46	47,159	
Nevada	Sept. 42	56	183	17	10	23	198	3		7	70	14	94	15	53	110	46			48	989
9 Mos. 1095	282	1647	268	200	435	1856	44	1	56	501	102	906	163	891	729	537	4	1	187	9,905	
New Hampshire	Sept. 165	25	527	31	24	79	430	23		17	91	51	157	13	179	178	25	4		23	2,042
9 Mos. 1493	239	4533	384	292	798	3787	304	3	100	862	464	1196	141	1792	1486	313	29	2	195	18,413	
New Jersey	Sept. 3198	517	5263	565	524	1110	4028	90	1	104	986	237	2483	202	2446	1519	257	10		216	23,766
9 Mos. 24799	5004	37725	6303	4906	8459	36231	1178	26	912	10553	2446	17156	2023	20689	13629	2866	151	4	1493	196,385	
New Mexico	Sept. 326	44	701	35	27	76	538	5		16	152	32	233	14	196	168	40			12	2,635
9 Mos. 2427	384	5071	507	276	796	4650	61	1	156	1236	274	1720	157	1611	1366	381	17	1	86	21,836	
New York	Sept. 5732	1697	12454	1353	924	2166	1110	242	3	246	2352	743	5162	437	5370	3706	443	31	4	539	54,136
9 Mos. 55565	12305	97952	15779	10324	21044	87740	2778	139	2492	24152	7364	47182	4389	52333	35773	5858	529	36	4970	448,968	
North Carolina	Sept. 1157	174	3624	258	181	370	1198	51		41	522	96	987	65	1195	968	123	9		17	13,038
9 Mos. 9184	1444	23329	2090	1599	3232	24769	444	15	345	4370	968	7625	509	8400	7738	1174	126	2	165	97,420	
North Dakota	Sept. 175	20	723	43	39	109	577	13		7	147	31	206	14	254	125	31			1	2,515
9 Mos. 1175	248	3956	437	376	842	3887	78	3	70	893	223	1357	138	1819	890	271	14		6	16,683	
Ohio	Sept. 4858	603	9654	761	623	1965	7940	172	13	173	2000	431	3775	255	3421	3220	404	21	3	69	40,361
9 Mos. 39782	6534	70478																			

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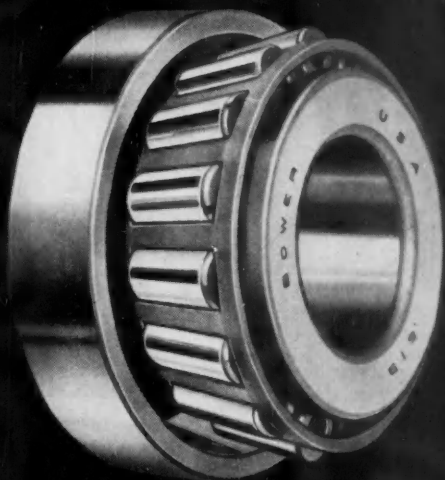
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Current Passenger Car Price, Weight and Body Table

Following are prices at factory for cars with standard equipment as of November 25, 1955.
State or local taxes, transportation and finance charges and optional equipment are extra.

BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight
BUICK Special	40				DE SOTO Fire					KAISER Special					PLYMOUTH Plaza 6				
Sedan, 2d	2111	202	2313	3750	Sedan, 4d	2393	194	2587	3855	Club Sedan	2141	193	2334	3210	Bus. Coupe	1594	132	1726	3030
Sedan, 4d	2166	206	2372	3790	Seville, 2d	2445	198	2643	3865	Sedan, 4d	2192	197	2389		Club Sedan	1666	139	1825	3100
Riviera, 2d	2204	209	2413	3775	Seville, 4d	2537	205	2742	3940	Manhattan					Sedan 4d	1726	142	1868	3145
Riviera, 4d	2270	214	2484	3860	Sportsman, 2d	2557	207	2764	3910	Club Sedan	2404	213	2617		Savoy 6				
Conv. Cpe.	2467	229	2696	3880	Sportsman, 4d	2649	214	2863	3920	Sedan, 4d	2453	217	2670	3375	Club Sedan	1776	148	1924	3125
Est. Wagon	2500	231	2731	3945	Conv. Cpe.	2768	223	2991	4090	Darrin	3368	300	3668		Sedan, 4d	1818	149	1967	3160
Century 60					Sta. Wagon	3037	243	3280	4230					Sport Cpe.	1915	156	2071	3155	
Riviera, 2d	2660	258	2918	3890	Fire					LINCOLN Capri					Belvedere 6				
Riviera, 4d	2717	263	2980	4000	Sedan, 4d	2803	226	3029	4030	Sport Coupe	3735		4289		Club Sedan	1856	152	2008	3125
Est. Wagon	2932	279	3211	4080	Sportsman, 2d	3014	242	3256	4030	Sedan, 4d	3821		4289		Spt. Coupe	1896	155	2051	3170
Conv. Cpe.	2979	282	3261	4045	Sportsman, 4d	3093	248	3341	4015	Premiere					Spt. Sedan	1983	162	2155	3165
Super 50					Conv. Cpe.	3198	256	3454	4125	Coupe	4183				Suburban 6	2056	167	2223	3270
Riviera, 2d	2884	275	3159	4140	DODGE Coronet 6					Sedan, 4d	4183				De Luxe, 2d	1977	161	2138	3285
Sedan, 4d	2927	278	3205	4200	Club Sedan, 2d	1961	160	2121	3250	Convertible	4318				Custom, 2d	2043	166	2209	3355
Riviera, 4d	3010	285	3295	4265	Sedan, 4d	2029	165	2194	3295						Custom, 4d	2086	169	2255	3375
Conv. Cpe.	3200	299	3499	4340	Coronet, V8					MERCURY Custom					Sport, 4d	2244	181	2425	3420
Roadmaster 70					Sedan, 4d	2061	167	2228	3380	Sedan, 2d	2012				Plaza 6				
Sedan, 4d	3148	310	3458	4280	Lancer	2129	172	2301	3435	Sedan, 4d	2102				Bus. Coupe	1690	139	1829	3170
Riviera, 2d	3230	316	3546	4335	Convertible	2187	177	2364	3430	Coupe, 2d	2157				Club Sedan	1782	146	1928	3250
Riviera, 4d	3324	323	3647	4395	Lancer, 4d	2293	185	2478		Sta. Wagon, 6p	2447				Sedan, 4d	1822	149	1971	3275
Conv. Cpe.	3332	324	3659	4395	Royal, V8	2257	182	2439	3475	Monterey	2537				Savoy 8				
CADILLAC Series 62					Sedan, 4d	2322	187	2509	3505	Sedan, 4d	2292				Club Sedan	1874	153	2027	3255
Coupe	3559	319	3777	4370	Lancer, 4d	2426	195	2623		Coupe, 2d	2362				Sedan, 4d	1914	156	2070	3295
Sedan	3658	319	3777	4370	Cust. Royal	2359	190	2549	3520	Sport Sedan, 4d	2382				Spt. Coupe	2011	163	2174	3275
Coupe de Ville	3964	341	4305	4427	Lancer	2424	195	2619	3505	Montclair	2487				Belvedere 8	1952	159	2111	3285
Convertible	4097	351	4448	4627	Convertible	2628	210	2838	3630	Coupe, 2d	2487				Club Sedan	1982	162	2154	3325
Eldorado	5814	472	6286	4809	Sta. Wagon					Sport Sed., 4d	2507				Spt. Sedan	2069	169	2258	3320
Series 60					Suburban, 6 cyl.	2237	180	2417	3455	Convertible	2612				Conv. Coupe	2152	174	2326	3415
Sedan	4342	396	4738	4540	Suburban, 8 cyl.	2337	188	2525	3605	NASH Statesman					Suburban 8	2238	181	2419	3435
Series 75					Sierra, 6 p.	2446	196	2642	3725	Super					De Luxe, 2d	2073	168	2241	3460
Filtw. Sedan	5695	492	6187	5015	Cust. Suburb.	2457	197	2654		Sedan, 4d	2025	190	2215	3134	Custom, 2d	2139	173	2312	3500
Filtw. Imper.	5995	507	6402		Sierra, 8 p.	2544	204	2748		Custom					Custom, 4d	2182	176	2358	3565
CHEVROLET One-Fifty, 6 cyl.					Cust. Sier., 6p.	2587	207	2794	3710	City Club					Sport, 4d	2340	188	2528	3605
Util. Sedan	1550	150	1700	3120	Cust. Sier., 8p.	2685	215	2900	3800	Ambassador 6					PONTIAC Chieftain 860				
Sedan, 2d	1635	157	1792	3155	FORD Mainline 6					Sedan, 4d	2183	202	2385	3204	Sedan, 2d	2008	195	2201	3436
Sedan, 4d	1675	160	1835	3195	Bus. Tudor	1562			3087	City Club	2286	209	2495	3220	Sedan, 4d	2060	199	2259	3496
Sta. Wagon, 2d	1955	182	2137	3335	Fordor Sedan	1657			3032	City Club	2271	209	2480	3538	Catal. Cpe.	2127	204	2331	3496
Sedan, 2d	1715	163	1878	3185	Customline 8	1743			3107	Ambassador V8	2453	222	2675	3576	Catal. Sedan	2195	209	2404	3561
Sedan, 4d	1755	166	1921	3220	Fordor Sedan	1785			3147	Custom	2565	230	2795	3593	Sta. Wagon, 2d	2311	218	2529	3596
Delray Cpe.	1770	167	1937	3185	Fairlane 6	1829			3107	Sedan, 4d	2547	228	2775	3795	Sta. Wagon, 4d	2389	224	2613	3696
Sport Cpe.	1855	174	2029	3225	Fordor Sedan	1871			3147	City Club	2724	241	2965	3827	Chieftain 870				
Sport Sed., 4d	1905	179	2083	3265	Victoria, 2d	1965			3202	City Club	2846	249	3095	3839	Sedan, 4d	2167	207	2374	3496
Sta. Wagon, 2d	1995	186	2181	3355	Crown Victoria	2099			3217	NASH-HUDSON Rambler					Catal. Cpe.	2229	212	2441	3496
Sta. Wagon, 4d	2040	189	2229	3405	Sunliner	2119			3217	De Luxe	1447	138	1585	2432	Catal. Sedan	2279	216	2495	3561
Sta. Wagon, 6p	2120	194	2314	3450	Crn. Vict. Trns.	2154			3227	Sedan, 2d	1447	138	1585	2432	Sta. Wagon, 4d	2478	231	2709	3641
Bel Air, 6 cyl.	1820	171	1991	3195	Sta. Wgn. 6					Super	1549	146	1695	2567	Star Chief 8				
Sedan, 2d	1860	174	2034	3235	Cust. Ranch	2016			3330	Sedan, 4d	1536	147	1683	2450	Sedan, 4d	2273	215	2488	3561
Sedan, 4d	1880	174	2034	3235	Ctry. Sed., 6p	2060			3345	Sedan, 4d	1643	155	1798	2570	Cust. Cat. Cpe.	2401	225	2626	3551
Sport Cpe.	1960	182	2142	3225	Ctry. Sed., 8p	2183			3420	Sta. Wagon	1709	160	1869	2495	Cust. Cat. Sed.	2468	230	2696	3631
Sport Sed., 4d	2010	188	2198	3290	Ctry. Squire	2183			3485	Custom	1821	168	1989	2606	Cust. Conv. Cpe.	2579	239	2818	3781
Convertible	2115	195	2310	3350	Bus. Tudor	1655			3196	Sedan, 4d	1821	168	1989	2606	Cust. Sta. Wgn.	2831	258	3088	3628
Sta. Wagon, 2d	2215	203	2418	3475	Fordor Sedan	1750			3238	City. Clb. Sed.	1923	175	2098	2685	STUDEBAKER Champion				
Sta. Wagon, 4d	2360	214	2574	3425	Fairlane V8	1836			3218	Sta. Wagon	1923	175	2098	2685	Custom	1590	161	1741	2755
One-Fifty, 8 cyl.					Fordor Sedan	1878			3258	Custom	1821	168	1989	2606	Sedan, 2d	1580	161	1741	2755
Util. Sedan	1642	157	1799	3095	Fordor Sedan	1922			3250	City. Clb. Sed.	1923	175	2098	2685	Sedan, 4d	1619	164	1783	2800
Sedan, 2d	1727	164	1891	3130	Fairlane V8	1964			3290	Sta. Wagon	1923	175	2098	2685	De Luxe				
Sedan, 4d	1767	167	1934	3170	Victoria, 2d	2058			3345	Hard Top, 2d	1330	115	1445	1875	Sedan, 2d	1674	166	1840	2760
Sta. Wagon, 2d	2047	189	2236	3310	Crown Victoria	2193			3370	Convertible, 4d	1353	116	1469	1835	Sedan, 4d	1715	170	1885	2820
Sedan, 2d	1807	170	1977	3160	Sunliner	2212			3455	OLDSMOBILE Series 88					Coupe, 5p	1705	170	1875	2790
Sedan, 4d	1847	173	2020	3195	Crn. Vict. Trns.	2257			3370	Sedan, 2d	2166				Station Wagon	1952	188	2140	3000
Delray Cpe.	1862	174	2038	3160	Sta. Wgn. V8					Sedan, 4d	2226				Regal				
Sport Cpe.	1947	181	2128	3200	Cust. Ranch	2016			3478	Sedan, 4d	2230				Sedan, 4d	1815	178	1993	2830
Sport Sedan	1997	185	2182	3260	Ctry. Sed., 6p	2153			3563	Hdtp. Conv.	2330				Coupe, 5p	1798	177	1975	2795
Sta. Wagon, 2d	2087	193	2280	3330	Ctry. Sed., 8p	2276			3628	Station Wagon	2397				Hdtp. Conv.	1941	188	2129	2865
Sta. Wagon, 4d	2132	196	2328	3380	Parklane	2276			3503	Commander					Station Wagon	2111	201	2312	3020
Sta. Wagon, 6p	2212	201	2413	3425	Ctry. Squire	2373			3638	Custom					Sedan, 2d	1695	178	1873	3050
Bel Air, 8 cyl.	1912	178	2090	3170	HUDSON Wasp					DeL. Hol. Cpe.	2520				Sedan, 4d	1738	181	1919	3095
Sedan, 2d	1952	181	2133	3210	Sed., 4d. Super	2096	194	2290	3254	DeL. Hol. Sed.	2586				De Luxe				
Sedan, 4d	1982	181	2133	3210	Hd. Top, 2d. Cus.	2254	206	2460	3347	Conv. Coupe	2726				Sedan, 2d	1785	184	1969	3075
Sport Cpe.	2052	189	2241	3200	Hd. Top, 2d. Cus.	2357	213	2570	3382	Series 98					Sedan, 4d	1827	187	2014	3110
Sport Sedan	2102	193	2295	3265	Hornet Six	2351	214	2565	3495	Holiday Cpe.					Coupe, 5p	1804	185	1989	3090
Convertible	2207	202	2409	3325	Sed., 4d. Super	2533	227	2760	3582	Hardtop, Sup.					Station Wagon	2069	205	2274	3295
Sta. Wagon, 4d	2337	210	2547	3450	Hd. Top, 2d. Cus.	2645	235	2880	3587	Constellation	</								

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1956 Tune-up Specifications

MAKE AND MODEL	ENGINE					TUNE-UP DATA											
	No. of Cylinders Bore and Stroke (In.)	Taxable H. P.	Piston Displacement (Cu. In.)	Maximum Brake H. P. at Specified R. P. M.	Compression Ratio	Spark Plug Make and Size (mm.)	VALVES						IGNITION				
							Seat Angle		Operating Tappet Clearance		Timing		Breaker Point Gap (In.)	Cam Angle (Deg.)	Spark Plug Gap (In.)	Timing Occurs T. C.	
							Inlet (Deg.)	Exhaust (Deg.)	Inlet (In.)	Exhaust (In.)	Inlet Tappet Clearance (In.)	Deg. Inlet Opens Before or After T. C.					
AMERICAN MOTORS CORP.																	
Hudson	*6-35540	6-3x4 $\frac{1}{2}$	21.60	202.0	115-4000	7.50	CH-14	45	46	.010H	.012H	.010H	26 $\frac{1}{2}$ B	.020	39	.032 TC	
	*6-35560	6-3 $\frac{1}{2}$ x4 $\frac{1}{2}$	34.08	308.0	160-3800	7.50	CH-14	45	45	.010H	.012H	.010	83 $\frac{1}{2}$ B	.020	39	.030 TC	
	*8-35580	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	46.50	320.0	208-4200	8.25	AL-14	30	45	Hyd	Hyd	NU	14B	.016	36	.035 5B	
Metropolitan	*4-541, 542	4-2 $\frac{1}{2}$ x3 $\frac{1}{2}$	10.63	73.2	42-4500	7.20	CH-14	45	45	.015C	.015C	.015	5B	.015	30	.024 11B	
Nash	Statesman 6-5640	6-3 $\frac{1}{2}$ x4 $\frac{1}{2}$	23.44	195.6	130-4500	7.45	AL-14	45	45	.012H	.016H	.015	12 $\frac{1}{2}$ B	.016	31	.030 TC	
	Ambassador 6-5680	6-3 $\frac{1}{2}$ x4 $\frac{1}{2}$	29.40	252.6	135-3700	7.60	AL-14	30	45	.012H	.016H	.023	12 $\frac{1}{2}$ B	.019	39	.030 4A	
	Ambassador 8-5680	8-4x3 $\frac{1}{2}$	51.2	352.0	220-4800	9.55	CH-14	30	45	Hyd	Hyd	NU	14B	.016	31	.035 5B	
Rambler	*6-5510	6-3 $\frac{1}{2}$ x4 $\frac{1}{2}$	23.44	195.6	90-3800	7.30	AL-14	45	45	.015H	.015H	.015	10B	.022	34	.030 4A	
CHRYSLER CORP.																	
Chrysler	8-C71	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	46.50	331.0	225-4400	8.50	AL-14	45	45	Hyd	Hyd	VTS	5B	.017	31	.035 2B	
	8-C72	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	49.70	354.0	280-4600	9.00	AL-14	45	45	Hyd	Hyd	VTS	15B	.017	31	.035 4B	
	8-C72-300	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	49.70	354.0		9.00	AL-14	45	45	.015	.024	VTS	35B	.017	31	.035 4B	
De Soto	8-S23	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	44.30	330.0	230-4400	8.50	AL-14	45	45	Hyd	Hyd	VTS	4A	.017	31	.035 8B	
	8-S24	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	44.30	330.0	255-4400	8.50	AL-14	45	45	Hyd	Hyd	VTS	15B	.017	31	.035 4B	
Dodge	6-D62	6-3 $\frac{1}{2}$ x4 $\frac{1}{2}$	25.40	230.0	131-3800	7.60	AL-14	45	45	.010H	.010H	.014	12B	.020	39	.035 2B	
	8-D63-1	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	42.20	270.0	189-4400	8.00	AL-14	45	45	Hyd	Hyd	VTS	14B	.017	31	.035 4B	
	8-D63-2	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	42.20	315.0	218-4400	8.00	AL-14	45	45	Hyd	Hyd	VTS	11B	.017	31	.035 6B	
	8-D63-3	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	42.20	315.0	230-4400	8.00	AL-14	45	45	Hyd	Hyd	VTS	11B	.017	31	.035 6B	
Imperial	8-C70, C73	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	49.70	354.0	280-4600	9.00	AL-14	45	45	Hyd	Hyd	VTS	15B	.017		.035 4B	
Plymouth	6-P28	6-3 $\frac{1}{2}$ x4 $\frac{1}{2}$	25.40	230.0		7.60	AL-14	45	45	.010H	.010H	.014	12B	.020	31	.035 2B	
	8-P29	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	42.50	270.0		8.00	AL-14	45	45	Hyd	Hyd	VTS	14B	.017	31	.035 4B	
	8-P29	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	45.00	277.0		8.00	AL-14	45	45	.012H	.020H	VTS	14B	.017	31	.035 4B	
FORD MOTOR CO.																	
Continental	8-60A	8-4x3 $\frac{1}{2}$	51.20	368.0		9.00	CH-18	45 $\frac{1}{2}$	45 $\frac{1}{2}$	Hyd	Hyd		18B	.015	27	.034 5B	
Ford	6	6-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	31.54	223.0	137-4200	8.00	CH-18	45 $\frac{1}{2}$	45 $\frac{1}{2}$	.019H	.019H	.019H	24B	.025	37	.034 (a)
	8-Mainline, Customline	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	42.05	272.0	173-4400	8.00	CH-18	45 $\frac{1}{2}$	45 $\frac{1}{2}$	.019H	.019H	.019H	12B	.015	27	.034 (b)
	8-Fairlane	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	45.00	292.0	200-4600	8.00	CH-18	45 $\frac{1}{2}$	45 $\frac{1}{2}$	.019H	.019H	.019H	12B	.015	27	.034 (b)
	8-Thunderbird	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	45.00	292.0	202-4600	8.40	CH-18	45 $\frac{1}{2}$	45 $\frac{1}{2}$	.019H	.019H	.019H	12B	.015	27	.034 3B
	8-Thunderbird	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	46.21	312.0	215-4600†	8.40*	CH-18	45 $\frac{1}{2}$	45 $\frac{1}{2}$	.019H	.019H	.019H	12B	.015	27	.034 (c)
Lincoln	8-73A, 73B	8-4x3 $\frac{1}{2}$	51.20	368.0	285-4600	9.00	CH-18	45 $\frac{1}{2}$	45 $\frac{1}{2}$	Hyd	Hyd	NA	18B	.015	27	.034 5B	
Mercury	8	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	46.21	312.0	210-4600	8.00	CH-18	45 $\frac{1}{2}$	45 $\frac{1}{2}$	.019H	.019H	.019H	12B	.015	27	.034 (b)
GENERAL MOTORS CORP.																	
Buick	8-40	8-4x3 $\frac{1}{2}$	51.20	322.0	220-4400*	7.60*	AC-14	45	45	Hyd	Hyd	.004	25B*	.015	21	.033 5B	
	8-50, 60, 70	8-4x3 $\frac{1}{2}$	51.20	322.0	255-4400	9.50	AC-14	45	45	Hyd	Hyd	.004	30B	.015	21	.033 5B	
Cadillac	8-60, 62, 75	8-4x3 $\frac{1}{2}$	51.20	365.0	285-4600**	9.75	AC-14	44	44	Hyd	Hyd		39B	.016	31	.035 5B	
Chevrolet	6-1500, 2100, 2400	6-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	30.40	235.5	140-4200	8.00	AC-14	31	46	Hyd	Hyd		10 $\frac{1}{2}$ B	.019	30	.036 TC	
	8-1500, 2100, 2400	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	45.00	265.0	162-4400†	8.00	AC-14	46	46	Hyd	Hyd		18B**	.019	30	.036 4B	
	*6-2934	6-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	30.40	235.5	155-4200	8.00	AC-14	31	46	.006H	.013H		19 $\frac{1}{2}$ B	.016	30	.036 TC	
	*8-2934	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	45.00	265.0	195-5000	8.00	AC-14	46	46	.008H	.018H		21 $\frac{1}{2}$ B	.019	30	.036 4B	
Oldsmobile	8-88	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	48.00	324.3	230-4400	9.25	AC-14	45	45	Hyd	Hyd	N	11 $\frac{1}{2}$ B	.016	30	.030 5B	
	8-Super 88, 98	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	48.00	324.3	240-4400	9.25	AC-14	45	45	Hyd	Hyd	N	11 $\frac{1}{2}$ B	.016	30	.030 5B	
Pontiac	8-5627	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	49.60	316.6	205-4600*	8.90	AC-14	30	45	Hyd	Hyd	ER	22B**	.016	30	.036 5B	
	8-5628	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	49.60	316.6	227-4800*	8.90	AC-14	30	45	Hyd	Hyd	ER	22B**	.016	30	.036 5B	
STUDEBAKER-PACKARD CORP.																	
Packard	8-5640	8-4x3 $\frac{1}{2}$	51.20	352.0	240	9.50	CH-14	29	44 $\frac{1}{2}$	Hyd	Hyd		14B	.016	27	.035 5B	
	8-5660	8-4x3 $\frac{1}{2}$	51.20	352.0	275	9.50	CH-14	29	44 $\frac{1}{2}$	Hyd	Hyd		14B	.016	27	.035 5B	
	8-5680	8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$	54.45	374.0	290	10.00	CH-14	29	44 $\frac{1}{2}$	Hyd	Hyd		14B	.016	30	.035 10B	
	8-5688	8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$	54.45	374.0	310	10.00	CH-14	29	44 $\frac{1}{2}$	Hyd	Hyd		14B	.016	30	.035 10B	
Studebaker	6-Champ., Pelham, Flight Hawk	6-3x4 $\frac{1}{2}$	21.60	185.6	101-4000	7.80											
	8-Commander, Parkview, Power Hawk	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	40.60	259.2	170-4500	7.80											
	8-President 2 & 4 dr. sed., Pinehurst	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	40.60	289.0	195-4500	7.80											
	8-President Classic, Sky Hawk	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	40.60	289.0	210-4500	7.80											
	8-Golden Hawk	8-4x3 $\frac{1}{2}$	51.20	352.0	275-4600	9.50											

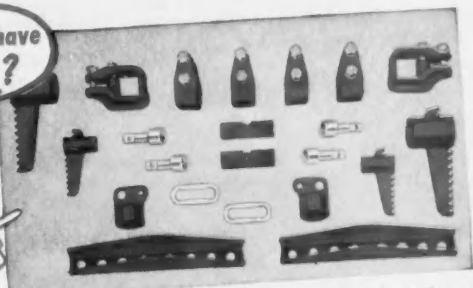
ABBREVIATIONS
 *—1955 production models.
 †—With overdrive only; 225-4600 with Fordomatic.
 ▲—With overdrive only; 9.00 with Fordomatic.
 ●—With automatic transmission.
 ■—8.90 with Dynaflo.

▼—30B with Dynaflo.
 **—Eldorado, 305-4700.
 ‡—170-4400 with Powerglide.
 ▲▲—26 $\frac{1}{2}$ B with Powerglide.
 ●●—27B with Hydramatic.
 (a)—4B with standard and overdrive transmission; 6B with Fordomatic.
 (b)—3B with standard and overdrive transmission; 6B with Fordomatic.

(c)—3B with overdrive; 6B with Fordomatic.
 A—After.
 AC—A.C. Spark Plug Div.
 AL—Electric Auto-Lite Co.
 B—Before.
 C—Cold.
 CH—Champion Spark Plug Co.
 ER—End of ramps used for valve timing.

H—Hot.
 Hyd—Hydraulic valve lifters, zero clearance.
 N—No or none.
 NA—Not available.
 NU—Not used.
 TC—Top center.
 VTS—Valve train solid.

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NEW! "Lock-On" double purpose tubing slides together quick as a wink! Can cut 50% off time it takes to make set-ups. Can also be threaded together. Ask for "Bantam" AZ-13 ass't (\$21.50) or FZ-14 (\$36.90) 10-ton "Lock-On" tubing.

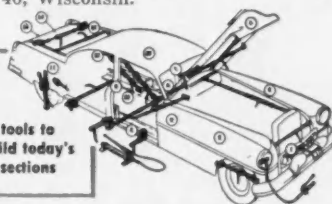
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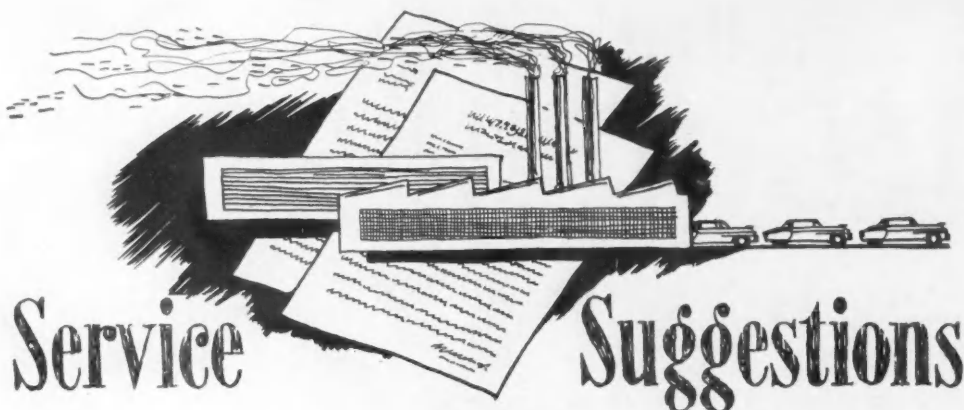


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Service

Suggestions

Remedy for Vibration Or Engine Movement

If a complaint of general vibration is encountered on a Dodge equipped with a Powerflite transmission, particularly during acceleration, or the engine appears to shift during brake application, there is a possibility that the condition is being caused by loose transmission extension housing to rear engine support sub-crossmember retaining bolts.

In order to check these bolts, it will be necessary to loosen the rear engine support bolts and then jack up the engine to gain access to the bolts in question. When checking these bolts, it should be assured that they are torqued to 50 ft. lbs. Failure to torque these bolts sufficiently could result in their eventual loosening, and thus permit the engine to shift forward sufficiently during a hard brake application to cause the fan to strike the radiator.

Recommended Procedures For Body Bolt Repairs

In the 1955 Mercury models, body bolts Nos. 7, 8 and 9 use welded nuts. If any of these nuts should break loose or if the threads become stripped, they may be repaired by using one of the following procedures. Procedure "A" is recommended as the most practical for servicing body bolts Nos. 7 and 8.

Repair Procedure "A" for Body Bolts Nos. 7 and 8: This procedure applies to both stripped and sheared off welded nuts. 1. If the

welded nut is stripped, ream to $\frac{3}{8}$ inch diameter. 2. Locate and drill a $\frac{3}{8}$ inch hole in lower side of frame side rail directly below present hole. 3. Install long bolt with insulator and retainer washer, secure with lock nut and flat washer from lower side. See figure 4. 4. Torque 15-30 lbs. ft.

Repair Procedure "B" for Body Bolts Nos. 7 and 8: This procedure applies only when the welded nut is stripped. The nut must be securely welded, and have ample stock around it. 1. Enlarge existing hole to $\frac{7}{16}$ inches. 2. Tap hole $\frac{7}{16}$ inch-14 thread size. 3. Install larger bolt with insulator and retainer washer. See figure 5.

Body bolt No. 9 uses a welded nut, but because of the type of open channel crossmember used, the nut is readily accessible. Repairs may be made quite easily by substituting a new nut and lock-washer.

Loose Bel Air Hub Caps Cause Tire Air Leakage

Conditions of tire air leakage between valve and tire rim, caused by rotation of hub cap against the valve, have been reported on early production 1955 Chevrolet passenger cars. This hub cap is standard equipment on the 1955 Bel Air Series.

This condition is caused by the failure of the projecting tabs in the hub cap retaining flange to hold on the raised lugs in the wheel rim. This permits the hub cap to rotate during vehicle operation against the valve assembly with a

force sufficient to displace the valve from the rim and cause air leakage from the tire.

Whenever this condition is encountered, the hub cap should be removed from the wheel and the tabs in the hub cap retaining flange pried outward by inserting a screwdriver or similar tool in the tab slots. With all tabs sufficiently raised to present adequate retaining area, the hub cap should then be installed so that a lug on the wheel rim is located between the two projecting tabs in each pair of tabs.

Windshield Alignment Insures Proper Fit

Body repairs around the windshield opening that require removal or replacement of the windshield glass in Plymouth should include an inspection of the opening to determine proper alignment between glass and body.

Unevenness of the opening due to a high or wavy spot on the windshield fence can cause the windshield to bind and crack after it has been installed.

The point of interference on a glass that has cracked is usually indicated by a sharp chip on the edge of the glass near the source of the crack. Burrs and visible high spots on the fence should be filed away or removed with a grinder.

Interior and exterior mouldings and the defroster distributor can also cause interference with the glass.

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Rambler Continued from Page 45

over-all increase of more than 30 per cent. Windshield area is increased more than 52 per cent; the rear window is 41 per cent larger.

Cooling capacity of the optional Rambler air-conditioning system has been improved in line with the increased requirements of the larger interior. The completely re-

designed unit incorporates the heater. All major components are located forward of the instrument panel.

The 1956 Rambler offers a choice of three transmissions: standard, standard with overdrive, and Dual-Range Hydra-Matic.

Seven models are available in four basic body styles—four-door

sedan, four-door hardtop, four-door Cross Country station wagon and four-door hardtop convertible station wagon. A wide range of new colors include 14 solid colors, 15 two-tone combinations, and 6 three-tone combinations.

**He who is not ready today
will be less so tomorrow.
—Ovid**

Sports Car Show Set for January

A sports car designed by J. A. Gregoire of France will make its world premier showing when the Henry Ford Museum presents its annual show of sport, competition and Grand Prix cars January 13-February 5.

The 1956 show has been extended to three weeks because of last year's record attendance of over 40,000 during a two-week period. Over 50 of Europe's finest sports cars, which will be specially shipped from England, France, Germany and Spain, in addition to favorite American models, will be on exhibit to help show the influence of European design on American styling.

Gregoire will send a complete car as well as a frame of cast aluminum alloy made up of one-piece cowlings, two front side members, two rear side members and cross pieces.

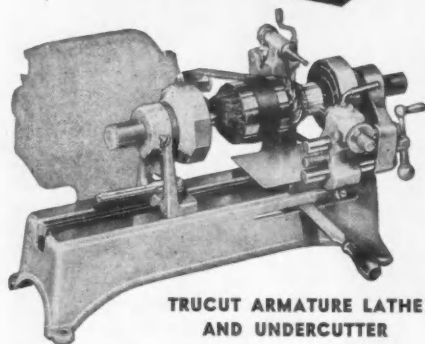
The car is front-wheel drive with independent springing on each wheel. The engine is an air-cooled flat twin four with compressor, giving the car a top speed of 200 k/m hr. The body is being built by Chapron of Levallois-Perret and will have "racy" lines similar to the Thunderbird.

This year's show will have a special night on January 20 for members of the Sports Car Club of America, who are holding their annual convention in Detroit during this time.

It is also anticipated that an experimental body, designed by the Ghia of Italy, will arrive for the show. The car, incorporating Ghia's latest ideas for design and streamlining, will also be making its first appearance in the United States.

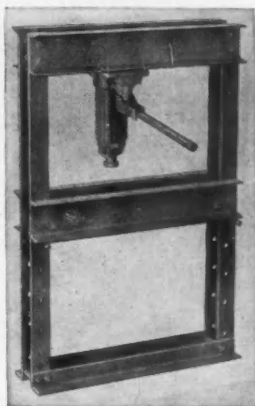
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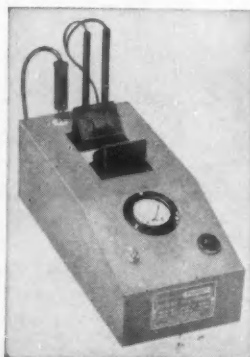


**TRUCUT ARMATURE LATHE
AND UNDERCUTTER**

For over 20 years TRUCUT equipment has more than paid for its own way for thousands of satisfied users. Especially designed for automotive repair work, it means steady extra profits, because it enables you to do more work in less time.



**TRUCUT HYDRAULIC
PRESS**



TRUCUT ARMATURE TESTER

TRUCUT also brings you new profits from jobs you may now send out. Enables you to machine and undercut commutators perfectly; test for shorts; make quick work of dismantling and assembling generators.

FRANK N. WOOD CO.
SINCE 1932
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334 W. Main St. • Waukesha, Wisconsin
Pacific Coast: 1330 W. Olympic Blvd., Los Angeles

In the Bag!

Added
Profits

All Winter Long

WITH **WEED V-BAR
TIRE CHAINS**



This green bag means safety for your customers . . . profits for you . . . with WEED V-BAR TIRE CHAINS.

All WEED CHAINS provide traction you can trust . . . far superior to any tire tread on ice or packed snow. Your customers use them only when needed . . . which means extra profit for you, putting them on every time it snows.

And remember . . . WEED CHAINS are priced to produce substantial profits on every pair you sell!

American Chain & Cable Company, Inc., York, Pa., and Bridgeport, Conn. • In Canada: Dominion Chain Company, Ltd., Niagara Falls, Ont.

Ask your Jobber's Salesman to balance your WEED stocks . . . now!

CLOSE-UP shows the WEED V-Bars . . . 288 or more steel gripping points, that stop the vehicle shorter, straighter, safer . . . provide real protection when it's needed



In Business for Your Safety

Go Modern...

WEATHERHEAD F-1 Merchandiser

AUTOMOTIVE FITTINGS STOCK CABINET



17

**OUTSTANDING
FEATURES**

Check

*Check these many
convenience features
against your present
stocking system.*

order now!

The F-1 Merchandiser is available for immediate shipment. Order now through your Weatherhead Warehouse or through The Weatherhead Company, Fort Wayne Division, 128 West Washington, Fort Wayne, Indiana.

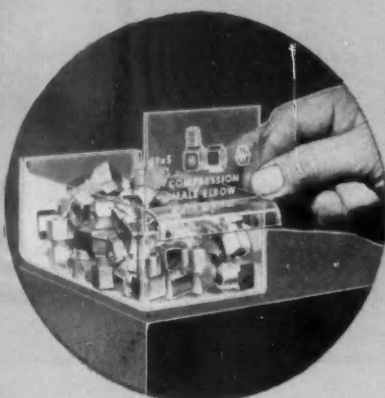


WEATHERHEAD *leads the way*



CLEAR PLASTIC

Provides at-a-glance inventory. Instant visual identification. Convenient, easy-pull handles. Safety drawer stop.



NO RELABELING

Plastic, slide-in labels for easy, instant identification. Permanently readable, easily cleaned, no relabeling necessary.

IDENTIFICATION PANELS

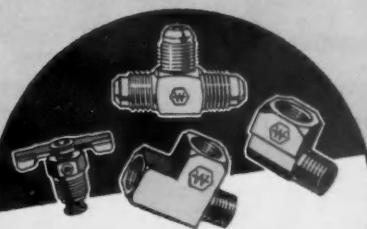
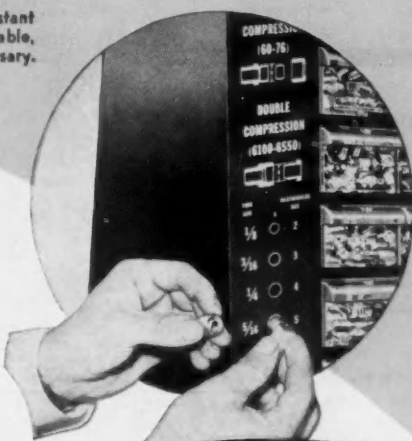
Side panel gauges provide ready means for instant physical size identification of parts. Loose or mixed parts quickly sorted for proper drawer.

Go Weatherhead

WITH THE

F-1 MERCHANDISER

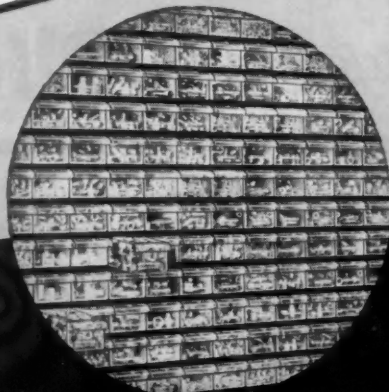
*Years Ahead In Modern Design
... In Time-Saving Features!*



World's largest original equipment manufacturer of automotive brass tube fittings, drain and shut-off cocks, fuel and oil lines, brake hose, power steering hose, dash controls.



WEATHERHEAD



192 DRAWERS

Use 161 drawers for initial Weatherhead fast-moving parts ... 31 extra drawers for additional parts. Note sloping front for easy visibility of all drawers.

THE WEATHERHEAD CO., FORT WAYNE DIVISION, DEPT. R-12, 128 WEST WASHINGTON, FORT WAYNE, INDIANA

Hudson Continued from Page 47

Six's. The newly improved Twin Ultramatic is available only on Hornet models powered by the new V-8 engine.

New "Selecto-Lift" starting is used on all Hudson models equipped with automatic transmissions. Ignition key starting is used on all other models.

The new Hornet and Wasp mod-

els feature the "Deep Coil" front suspension for greater handling ease, riding comfort and stability on turns. Frictionless coil springs are used on all four wheels.

Front wheel brakes of the 1956 Wasp have been increased to 165 square inches.

All Hudson cars employ the single unit car construction with

body and frame welded together to form a single unit. The "air-liner reclining seats" and convertible twin bed combination are standard features on all Hudson custom models and optional on super models.

Power assists, such as power steering, power brakes and power-lift windows, are available on all 1956 Hudson models as optional extra cost equipment.

The All-Season air conditioning system is offered as extra cost optional equipment on both models. It combines refrigerating, heating and ventilating into one integrated unit, operated by a single temperature control knob. The "Weather Eye" heating and ventilating system also is offered as optional equipment on the new models.

The new combined parking light and turn signal assembly is blended with the V-line pattern of the grille for easy visibility from front and side.

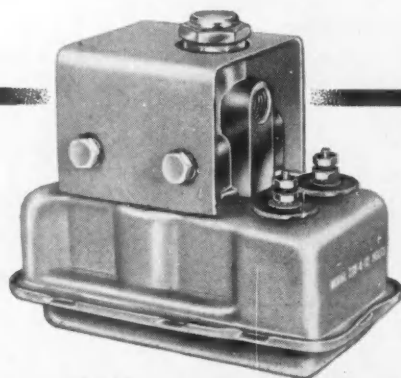
A new Hudson medallion is set in the V-shape "break" of the upper portion of the grille, with the Hudson name prominently displayed on the leading edge of the hood. The front fender appearance is enhanced by ornamental "air intake scoops."

The side panels of the 1956 Hornet and Wasp models continue the V-line styling theme with a new chrome moulding highlighted by a "V" break. A gold color panel highlights all custom models. The new tail-lights, elliptical in shape, blend into the fender with new chrome fins. A new rear deck ornament, handle and key lock round out its appearance.

All Hudson models utilize squeeze-type safety door handles.

The dash panel is highlighted by an easy-to-read instrument cluster, featuring a horizontal "thermometer" type speedometer, centered in front of the driver. The top of the dash panel is lined with a soft "crash pad" made of Royalite. All Hudson custom models have a burnished and perforated aluminum trim insert extending across the entire panel width.

**Insure
fast
starts**



...even in coldest weather!

STEWART-WARNER
Electric FUEL PUMPS

**Positive fuel delivery,
less battery drain, less "roadside time"!**

With the exclusive Stewart-Warner diaphragm there are no rotating parts, no pistons. Operating independently of the engine, you are assured of positive, abundant flow of gas the moment the ignition switch is turned on. Works *only* as gas is needed—saves wear—saves battery.

But even more impressive is the money saved in decreased roadside time—longer battery life—improved performance!

Heavy duty construction throughout. Heavy tungsten and platinum switch points combined with booster breaker spring mean no more pitting, arcing, burning. Weatherized finish is bright green baked enamel. Neoprene impregnated gasket seals out rain, road-splash. Protected under all conditions.

Start now to *save* with Stewart-Warner Electric Fuel Pumps. See your dealer or write:

STEWART-WARNER

Instrument Division, Dept. FF-125
1840 Diversey Parkway, Chicago 14, Illinois

HOLMES *New* SHOP TOOLS

Simplify Job of Servicing HYDRAULIC VALVE LIFTERS



LIST
\$98⁰⁰

HOLMES SERVICER FOR VALVE LIFTERS

- ✓ Removes stuck plungers.
- ✓ Permits Leak-Down Test before Lifters are installed.
- ✓ Provides means of prolonging use of Lifters.
- ✓ Saves time dismantling and reassembling Lifters.

THE HOLMES SERVICER represents many years of research in the development of a new and easier way to service Hydraulic Valve Lifters. Perfection of this new machine not only simplifies what has long been a very tedious job, but actually provides a means of reclaiming lifters that would otherwise be thrown away. The easy removal of stuck plungers from their bodies and simple but accurate leak-down test provided by the Holmes Servicer, prevents the scrapping of useful lifters—assuring replacement with only perfect valve lifters. Results for the shop are a faster job, a handsome profit and confidence in a job well done ... to the customer it means a saving in the purchase of unnecessary new valve lifters and assurance of a factory quality job. It requires but ten or fifteen minutes to check a full set of lifters, giving each an accurate leak-down test before it is put back in service. The Holmes Servicer is a precision tool, greatly needed for rapid, dependable servicing of valve lifters and should be in every shop desiring better profits and customer satisfaction.

HOLMES LIFTER REMOVING TOOL

Here's a new tool that performs one of the shop's most aggravating and time consuming operations—removal of Hydraulic Valve Lifters that are stuck in the cylinder block. Today it is no longer necessary to remove the oil pan and drive the lifters out. Introduction of this tool now permits a mechanic to remove all lifters from the top side of engine. This tool is designed with a tee handle on one end and an internal expanding chuck on the other which can be snapped into the retaining ring groove of the lifter body and locked in place. Lifters are then removed quickly and easily, without distortion or damage. The Holmes Remover for Valve Lifters is truly a much needed tool that every mechanic should have.



LIST
\$9⁰⁰

Order from your jobber . . .



Or Write Factory Direct

ERNEST HOLMES COMPANY

2505 EAST 43RD. STREET

CHATTANOOGA, TENNESSEE

Replacement Parts . . . Continued from Page 49

give incorrect valve clearance readings. The actual clearance will be on the plus side and can contribute to valve breakage and noise. The first signs of tappet screw or rocker arm wear can be noticed on the valve stem tip. The edges of the chamfer, which are normally sharp, will be round.

The corrective measure to be

taken is to regrind the worn surface to its original contour, thus providing for the proper feeler gage reading. In cases of extreme wear, replacement of the tappet screw or rocker arm may be necessary. Rocker arm bushings should be checked for extreme wear and replaced if necessary.

The next item to check is the

valve guides. Valve guides usually wear in the form of bell mouth on the ends or directional wear, which makes an oval out of the inside diameter which can't be measured with a plug gage. The best tool for this operation is a small hole gage. Both the tapers and the amount of oval can easily be taken from the guide and transferred to a standard micrometer. Also a dial gage can be used.

Control Temperature

Worn valve guides play a very important part in controlling valve temperature. As the guide clearance increases, there is less contact between the stem and guide, thus causing less heat conductivity, giv-

Tempo Auto Touch-up INSTANT-SPRAY



- FORD
- CHEVROLET
- PLYMOUTH
- OLDSMOBILE
- BUICK



...means PROVEN PROFITS

Yes. Proven! All over the country, Tempo is the hottest item to hit the dealer's counter. TEMPO INSTANT-SPRAY sells on sight because it's slick, quick, easy to use and priced to sell.

Put this colorful new display on your counter and watch 'em stop and buy. Dealers themselves have found it the best way for touch-up work and new car conditioning right in their own shop without resorting to messy and expensive equipment. The colors are factory-matched and dry in minutes. Tempo is available for Ford '54-'55-'56, Chevrolet '53-'54-'55-'56,

Plymouth '55-'56, Buick '55-'56 and Olds '55-'56 as well as Primer, Leveler, Appliance White, Chrome-Sheen Aluminum and Ignition Protector.

Contact your jobber today for the deal of your life or order from:



Tempo Instant Spray also available in a complete line of Factory-Approved outboard motor colors and marine finishes.

TEMPO PRODUCTS CO.

2075 East 65th St., Cleveland 3, Ohio



"Vicar, I hope that's brimstone I smell on your breath!"

ing a temperature rise in both the valve stem and head. The higher clearance also allows movement of the valve on its seat causing wear and gas leakage factors that contributes to valve burning and loss of power.

Valve spring tension should be checked on every job with an accurate scale. Tension loss exceeding 10% of the specified load should indicate replacement. Another factor to be considered is pressure loss, but not to the spring itself, but to the lowering of the valve on the seat caused by refacing and reseating. As the seat is ground deeper, the spring operating height is progressively longer, and the spring operating loads are lower.

When the seat is lowered as much as 1/16 in. or more, it is desirable to reestablish the correct spring height by the installation of spacer washers.

If car is equipped with hydraulic
(Continued on page 88)



...time-saving

Snap-on Tools

can solve your biggest service headaches

Thousands of dealers have found there's a big pay-off in being *personally* concerned with the *kind* of tools in their mechanics' hands.

Taking a man's tool equipment for granted can cost plenty!...in man-hour productiveness...in customer satisfaction...in shop volume and in service profits.

That's truer today than ever before. More cars by millions—and *more advanced cars*, present servicing requirements to challenge the ablest mechanics. Consequently, your profit percentage from shop operations (labor plus parts sold) depends in large measure upon the adequacy of the tools your mechanics are using.

To increase profit percentage do this. See to it that *Snap-on Service is covering every man in your*

shop. Invite the *Snap-on Man* in, welcome him, endorse him. Do as many profit-minded operators have done...ask him to assist in planning the modernization of service tool equipment throughout your shop and, if desired, arrange installment financing for shop or individual mechanics.

You'll be in good company, for in thousands of shops *Snap-on Service* is literally an institution. Service Managers like it. *Mechanics like it*. They have pay-check proof of the earning power of a complete set of the *right* tools.

Ask your shop foreman *now* to notify you next time the *Snap-on Man* calls...make profitable use of the service he can render.

SNAP-ON TOOLS CORPORATION

8036-L 28th Avenue • Kenosha, Wisconsin

*Snap-on is the trademark of Snap-on Tools Corporation



get a better
grip on your job
with

Interlocking
channels...
a Channellock
exclusive

Re-inforced ten-
sion edge...
another Chan-
nellock exclu-
sive

CHAN NEL LOCK

No. 420

"Grips like a pipe wrench!"
"A cinch to use in hard-to-
get-at places". Reasons why
Channellock No. 420 is the first
choice of skilled mechanics...
everywhere. And *only* Chan-
nellock has the interlocking
channels that can't jump out
no matter how hard you grip.
Only Channellock has the
re-inforced tension edge to
withstand maximum gripping
force. So when you ask for a
Channellock, be sure you get
genuine Channellock. Look
for the trade mark on the
handle.

CHANNELLOCK
first choice of skilled Mechanics



CHAMPION DEARMENT TOOL COMPANY
MEADVILLE, PENNSYLVANIA

Replacement Parts...

Continued from Page 86

lifters they should be removed and washed in a suitable solvent to remove all traces of varnish or carbon. Carefully inspect surface of plunger and bore of body for scoring or other damage which would prevent free movement between these parts. If such damage exists the lifter assembly must be replaced.

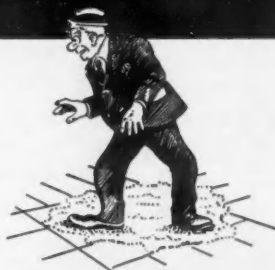
When refacing valves remove only enough metal to true up the surfaces and remove the pits. The valve head will run hotter as its thickness is decreased. If the valve head must be ground until the outer edge is sharp (in order to clean up the face), the valve should be discarded and replaced with a new one.

Lash Adjustment

On engines equipped with mechanical valve tappets manufacturers usually recommend a hot or cold setting. Unless otherwise instructed by the manufacturer, lash adjustment should be made on a thoroughly warmed engine. There is a possible wide fluctuation in the valve lash readings between a cold and a thoroughly warmed engine. Some engines may show a change in valve lash of .005 in. or more between a cold and thoroughly warmed engine.

Always set valve lash to manufacturer's recommended setting.

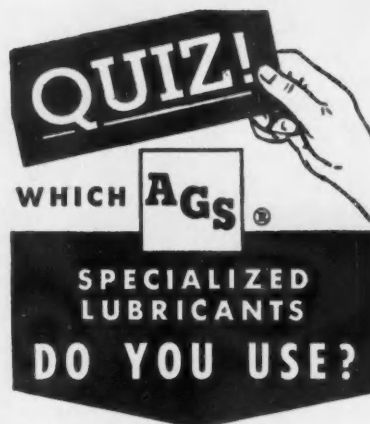
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SOL-SPEEDI-DRI!



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- Less "caking," less "mat-ting," less labor.

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SPEEDI-DRI CORP., Menlo Park, N.J.



Chances are you're already using one or more dependable AGS lubricants — and know how they improve any lube job... and give your work that extra touch of quality. So why stop short — with just one or two items? Use the full AGS line to really round-out your service... and increase your resale profits!



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Industry recommended for lubricating of all rubber parts and fittings—clean and dress-up rubber—faster, safer Tubeless Tire servicing.



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Protects all locks against freezing, sticking, rust and wear. Penetrates quickly, seals out moisture and dust from working parts. Use on every lube job—sell it, too!



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Stick Lubricant

A clean lubricant for ear door, trunk and hood fitting and other exposed parts... stops squeaks and binding. Excellent for home use, too. Will not stain.



DOOR-EASE®
Dripless Oil

Runs in... won't run out! Long-wearing... weather and rust-proof film for hard-to-get-at places. Dozens of resale uses.

AGS®
PRODUCTS

See your supplier or write

AMERICAN GREASE STICK CO.
MUSKEGON, MICHIGAN



First and Foremost

FOR HIGH COMPRESSION ENGINES

FITZGERALD GASKETS

- Performance proven . . . the best answer to the need for stronger, tougher gaskets for modern high compression engines.
- For replacement trade and original equipment, FITZGERALD Gaskets have stood the test of time since 1906.
- Sold throughout the world.
- The name "FITZGERALD" stamped on every gasket is your guarantee of satisfaction.

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FOR OIL, GASOLINE AND WATER CONNECTIONS
COMPLETE SETS FOR MOTOR REBUILDERS

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CANADIAN FITZGERALD LTD., TORONTO, CANADA



FITZGERALD
Gaskets
SINCE 1906



Driver Training Continued from Page 52

school classrooms through a 10-county area.

Originate in Mansion

The programs originated in a smoke-smudged stone mansion which serves as a studio for WQED, Pittsburgh's non-commercial educational TV station. Each week the Chevrolet convertible

glided into an annex that once was a ballroom to the mansion. As high school students gathered near classroom TV sets—and many of their parents took time out from household and business chores—the electronic hubbub subsided in time for Harold A. Fischer, supervisor of safety education for the Pittsburgh public schools, to approach

the car wagging a long pointer.

Though the Chevrolet was not actually driven in the studio, it aids in explaining how to drive around curves, come out of a skid, use signal devices, read instruments and take other safety measures.

"I've often said that I could probably teach a chimpanzee to drive," Fischer explains. "But what I couldn't do is give him the safe, sportsmanlike attitudes that are necessary on today's highways. That's what we're really concerned with on these programs, not just getting students drivers' licenses."

Appropriately, the title of the weekly series is "Drive and Survive." Its scope includes demonstration of depth-perception, reaction-time and other psycho-physical testing devices. Fischer also probes such problems as highway engineering and financing.

"We feel that the traffic toll is one of modern society's most serious problems and therefore warrants our most serious concern on all fronts," Fischer explains. "Sta-
(Continued on page 92)"

WHY

you should replace
timing chain and sprockets at
every engine overhaul!




**LOOK HOW A SLIGHT
TIMING LAG AFFECTS
CAR PERFORMANCE**

1 FIRE

LAG IN PISTON FIRING: Carbon, overheating, plug fouling, scored cylinders, fuel waste.



2 EXHAUST

LAG IN EXHAUST VALVE OPENING: Burning of exhaust valves, loss of compression.



3 INTAKE

LAG IN INTAKE OPENING: Low fuel charge, power loss, vacuum that pulls oil past rings.



4 COMPRESSION

LAG IN INTAKE CLOSING: Fuel and pressure backfire through carburetor, damage pistons and valves.



WHEN YOU REPLACE TIMING CHAIN AND SPROCKETS BE SURE TO USE "LINK-BELT"
... THE WORLD'S FINEST ORIGINAL EQUIPMENT LINE

At every overhaul — while the engine is down — that's the convenient time to replace timing chain and sprockets. You protect your service reputation . . . assure positive valve timing and high engine efficiency. Use Link-Belt, the timing chain having segmental bushings with anti-whip, anti-back-bend features. Carried by leading jobbers.

LINK-BELT

TIMING CHAINS AND SPROCKETS

LINK-BELT COMPANY, 220 South Belmont, Indianapolis 6, Ind. Warehouses in Principal Trading Areas.

Radioactive Rings Tested at Linden

A "hot" car was shown Nov. 22 at the Esso Research Center in Linden, N. J., as part of a demonstration on present and potential uses of atomic radiation in the oil business.

The "hot" auto has nothing to do with hot-rod specials. It is a test vehicle equipped with radioactive piston rings.

The Esso Research and Engineering Company and other firms in the industry are using the technique to get highly accurate data on engine wear in minutes or hours. The job formerly required weeks or months.

Houston Warehouse

L. E. Orgill, president of U. S. Axle Co. (Pottstown, Pa.), has announced the opening of a warehouse in Houston, Tex. Mr. Orgill also announced the appointment of McDermott & Tighe as sales representatives for the South and Southwest areas.



The **PLANNED** assortment of . . .

Thompson Products

SKY-RIDE
Airplane Type
SHOCK ABSORBERS

in this eye-catching counter display

FITS 85% OF YOUR MARKET

WITH the all new Thompson SKY-RIDE, you're handling America's fastest-selling shock absorber. And now you can get the market's handiest, neatest point-of-sale display kit . . . 6 pairs (yes, you'll sell 'em *by the pair!*) of high-profit SKY-RIDES, to meet the requirements of 85% of your market.

And that's not all! Included in this attractive package deal are smart-looking window streamers in bright yellow-and-black . . . banners for your back wall or large window . . . plus purchase-prodding reminder tags to put on your customers' cars.

ASK YOUR THOMPSON JOBBER NOW FOR THE ATTRACTIVE PRICE ON THIS COMPLETE POINT-OF-SALE MERCHANDISING ASSORTMENT!

For the smoothest ride
CUSTOMER'S
of your life . . .



See your
Thompson
Products Jobber

THOMPSON SERVICE SALES
 2209 Ashland Road • Cleveland 3, Ohio

Driver Training Continued from Page 90

tistics cited on the program show that the annual highway death total, which ran over 36,000 in the nation in 1954 and over 38,000 in 1953, is higher than the number of American fatalities in all three years of the Korean War."

There's every indication that Pittsburghers are impressed with the combination of Fischer's hard-

hitting approach and the allure of television.

"Your charts, graphs and models make the textbook assignments more meaningful to the students," writes a driver training instructor at suburban Sewickley High School. "They enjoyed, especially, the first program in the present series dealing with the ways the automobile

has changed our pattern of living, and also the program on the traffic laws (centrifugal force, etc.) made by nature."

A housewife phoned to tell Fischer that she learned more about driving from one of his programs than from weeks of instruction at the hands of her well-meaning but not always patient husband.

"A person who can drive well himself isn't necessarily a good teacher," Fischer points out. "Moreover, if he has bad habits, he's likely to pass them along with the good."

Though he is wary of overrating the potentialities of television, Fischer is hopeful that its audience appeal will offer a revolutionary boon to traffic safety.

"It's possible that persons who have ignored driving training before—those who just don't seem to want to be educated—can be attracted by race drivers or other well-known personalities putting the safety pointers across on television," he explains.

"We're still in the hit-and-miss stage in safety education. What, for example, makes a small child walk down to the corner instead of crossing the street in the middle of the block? Was it something his teacher said that impressed him? Or was it something he saw in the movies? We haven't found out for sure yet.

"But it may be that television has led us to the threshold of the answer to our entire safety program."



"\$13,904

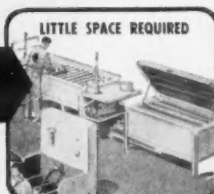
In only 9½ months
**SERVICING
RADIATORS!"**

Says . . .
**McCain-Richards, Inc.,
Monroe, La.**

**INVESTIGATE THE HUGE PROFIT POTENTIAL
IN AN INLAND RADIATOR DEPARTMENT!**

"Our radiator department took in \$13,904.14 from April 11th through the following January! We find that, in addition to helping us maintain 100% service absorption, when we pull a radiator off a car we have excellent opportunities to sell motor exchanges, overhauls, radiator hose, water pumps, and other related items!"

Few automotive services offer such a potential for new and expanded business. Of the 60,000,000 vehicles in the U. S., over 20,000,000 require radiator service yearly. Inland-developed equipment allows Inland-trained operators to employ highly profitable production methods. And Inland, world's largest manufacturer of radiator servicing equipment, offers the only complete package—equipment, free training and merchandising!



FREE TRAINING SCHOOL

Practical factory school trains you or your man quickly. Cleaning, repairing, recoring, pricing, merchandising—everything! Hundreds of graduates now expert radiator repairmen. FREE to Inland customers!

MAIL TODAY!

New free 48-page "Blueprint for Profit" gives you experiences of many of the thousands all over the nation making an EXTRA \$8,000 to \$15,000 a year, details and prices of required equipment, Inland's "Pay-For-Itself" payment plan. Invest a minute to mail the coupon—the rewards can be amazing!

**INLAND Mfg. Co., 1108 Jackson St.,
Dept. MA-12 Omaha 8, Nebr.**

World's Largest Manufacturer
of Radiator Servicing Equipment
"SOLD EXCLUSIVELY BY MAIL!"

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Please send new free booklet "Blueprint for Profit"

FIRM PLEASE PRINT

ADDRESS

CITY ZONE STATE

BY TITLE

If Dealer, make of car sold

Are you now operating a radiator shop ☐ Yes ☐ No



BILLY, THE PENGUIN at the Toledo Zoo, gives his final approval to the Willys Jeep that is soon to be wheeling across the icy wastes of the South Pole. The Jeep is to be used in the expedition "Operation Deepfreeze."

Handle TODAY'S REPAIRS Right!

Choose
"Professional" Tools
by
New Britain



Greater strength, better fit, completeness of Line... New Britain Hand Tools offer you these BIG advantages. They handle today's repairs better, easier, and faster—add up to big savings in mechanics' time and trouble.

Whatever the job, there's a New Britain Tool designed to do it *right*—a complete Line of rugged Tools, designed by mechanics for mechanics, available individually or in sets to meet every shop requirement. All are carefully engineered, made from top quality materials, and fully guaranteed. You can count on New Britain Tools to give a lifetime of useful service.

See these great New Britain Tools today! Write for Catalog No. 58 and complete details.



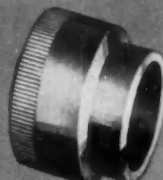
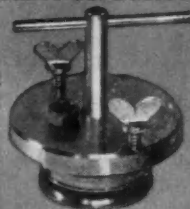
New Britain

GREATER STRENGTH • BETTER FIT
THE NEW BRITAIN MACHINE CO. • NEW BRITAIN, CONN. **HAND TOOLS**

NEW! TOOLS FOR HYDRA-MATIC TRANSMISSIONS



ACT-1
FRONT & REAR
CLUTCH TESTER



AGS-1
GOVERNOR SLEEVE
ALIGNING TOOL

PLUS... A Variety of Tools for Servicing Other Automatic Transmissions!

**DYNAFLOW • POWERGLIDE
FORDOMATIC • MERCOMATIC
HYDRA-MATIC**

Ask for Complete Information

Thunderbird Continued from Page 53

spare tire carrier. The luggage compartment is reported to accommodate two sets of golf clubs and three suitcases.

Safety Features

As in the 1956 Ford passenger cars, a variety of "Lifeguard" safety features are available. As standard equipment on the Thun-

derbird 56 is a deep-center steering wheel, double-grip door lock, and shatter-resistant rear view mirror. Optional equipment available includes seat belts, cushioned sun visor, and padded instrument panel.

Engine breathing on the Thunderbird 56 is facilitated by larger passages in the heads and intake manifolds, which will admit more

fuel-air mixture when it is needed.

Dual exhaust ports are located in the wraparound areas of a new rear bumper. The bumper's center section is built around the continental-type spare tire cover. It incorporates the license plate frame and light.

An alternate hardtop with a port hole in each side is available as an option in place of the regular hardtop. On the soft top there is a larger rear window, equipped with a zipper so it may be rolled down to allow full air passage.

Thunderbird 56 will be available in seven different solid colors, two more than last year—raven black, torch red, buckskin tan, colonial white, peacock blue, Thunderbird green and Thunderbird gray. Two-tone combinations are standard.

A combination tonneau and convertible storage compartment cover is available as an option. The color matches the interior bolster. A zipper down the middle runs the full length of the cover so that the car may be operated with the passenger side protected by the tonneau cover.

Ride and handling have been improved by new shock absorbers, longer rear springs and an increased steering ratio of 23-1.

The 12 volt electrical system is standard on Thunderbird 56.

**FOR YOUR PROTECTION
INSIST ON *SUNNEN*
MEASURED PIN FITS**



**Don't
Let
This
Happen to You**

Piston Failures are Expensive . . . In Loss of Profit and Loss of Good Will

Many piston failures have been traced to incorrect Pin Fits which do not allow cam-ground pistons to expand properly, resulting in scored and broken pistons.

Whether you fit your own pins or send the work out, we can help you eliminate practically all comebacks from piston scuffing and scoring.

Our 24-page booklet "Just What Is A Pin Fit" gives the complete story, with many illustrations of actual piston failures and their causes. Endorsed by piston, ring and car manufacturers—200,000 requests already filled—why not drop us a card for your own free copy.

Why not insist on the best . . .

**Specify Sunnen Precision Pin
Fitting Equipment**



Two dogs were having a chat one day and one of them noticed the other was feeling awfully low. So he said to his friend:

"Why don't you go to a psychiatrist?"

To which the other dog replied:

"You know I'm not allowed on the couch."

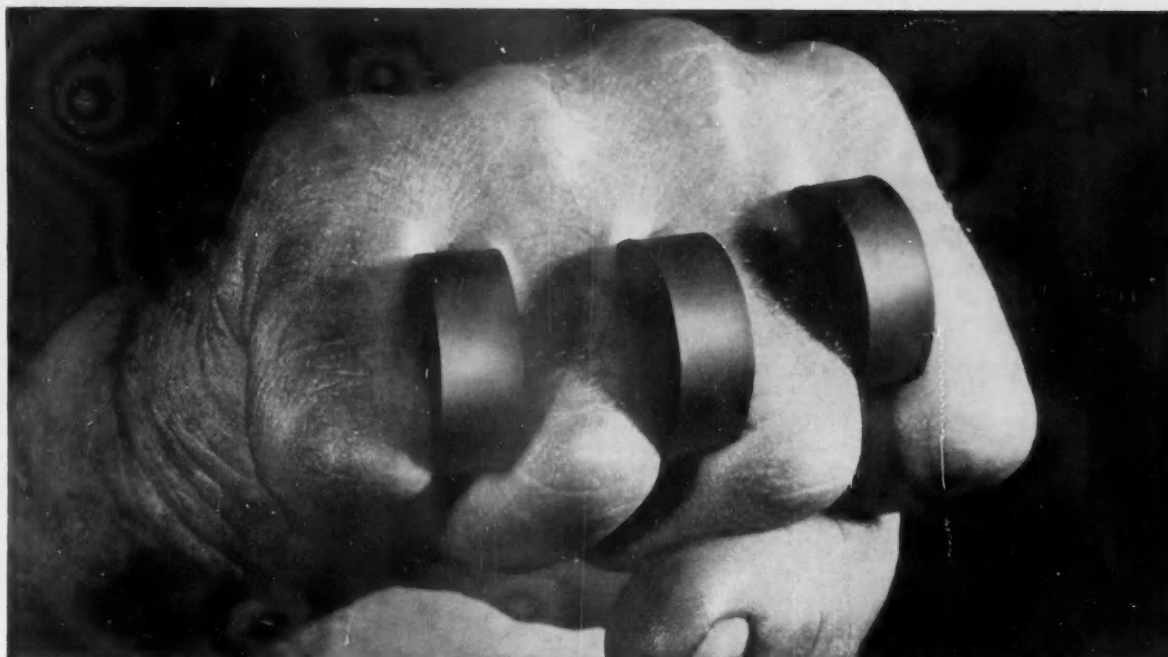
3M Sign Contest Award Winners

Highway advertising signs for an auto dealer and an auto service shop captured first and second place awards in a national sign competition sponsored by Minnesota Mining and Manufacturing Co., St. Paul, Minn.

A sign advertising Fincher Motors, Inc., Rochester, N. Y., was awarded first place. Second place went to Tait's Auto Service, Brunswick, Ga.

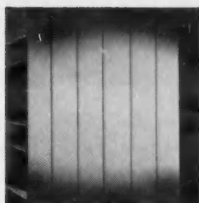
ARMSTRONG TUBELESS TIRES'

"Ounce of Prevention" Safety Discs

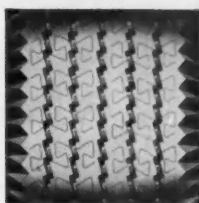


Give Skid Protection No "Original Equipment" Tires Offer

Just like the edges of your fist, tread ribs of ordinary tires tend to compress into a smooth and slippery surface under brake pressure. This pressure causes the tread to lose its vital grip on the road...and you skid!



With Armstrong Tires, the tread can't compress! Can't squeeze together. For, just like your fingers when you put rubber discs between them... "Ounce of Prevention" discs keep the gripping edges apart. Tread can't lose its grip on the road...thus preventing dangerous skids!



Surveys conducted by reputable research firms prove that neither brand name nor price can clinch a tire sale. The public looks first for *safety*...safety that can be demonstrated!

Small wonder then that ARMSTRONG has taken such giant strides in the past ten years. For, only ARMSTRONG Tires are safety engineered to fully meet the demands of high-speed, high-powered cars. ARMSTRONG'S exclusive features are easily demonstrated, too, as shown in the illustrations at the left.

Further indication of ARMSTRONG'S product superiority is this fact:—*Each year more people switch to ARMSTRONG Tires than ever before!*

For your own profitable future, investigate the advantages of an Armstrong franchise today!

ARMSTRONG RUBBER CO.

ONE OF AMERICA'S LEADING PRODUCERS OF REPLACEMENT TIRES

MAKERS OF ARMSTRONG PURE FOAM FOR FURNITURE AND BEDDING, HOME OFFICE WEST HAVEN, CONNECTICUT

New Checker Cab Taxi Introduced

By Joseph Geschelin
Engineering Editor

Backed by an outlay of almost \$5-million for new assembly lines, conveyors, a battery of new presses, welders, dies, and fixtures, etc., the Checker Cab Corp., Kalamazoo, Mich., has introduced a newly designed taxicab model for sale to its own operating divisions as well as to independent operators.

It also represents a major switch in merchandising since the cab is readily convertible to a passenger car for use by private owners as well as fleet operators. For this purpose the public will be provided with a vehicle said to be capable of operating over great mileages without requiring much maintenance and providing exceptional operating economy.

Two Models

The new taxicab will be available in two models—the A-8 Standard with conventional equipment; the A-8 Div-Er-Matic Special, fully equipped with such extras as a fully automatic transmission, Bendix linkage type power steering, and power brakes. The Standard model will be priced at \$1805; the Special at \$2206. It should be noted that these prices do not include tax or delivery and do not include the cost of tire equipment since taxicab operators generally get tires on a rental basis.

Although the price on the Special as a passenger car has not been established, it is expected to be only a little higher than the \$2206 figure. When specified as a passenger car, the vehicle can be trimmed in a choice of textiles, and is available with an engine power package to increase output to 113-hp.

Continental Engine

As illustrated at the top, the new Checker cab has been styled along conventional lines and with the minimum of ornamentation. It is mounted on a chassis frame with wheelbase of 120 in., overall length of 200 in., and has a turning radius of only 37 feet. Being designed specifically for taxicab operations,



Above photo shows side view of cab.

the vehicle is equipped with the same Continental engine used heretofore, fitted with a special camshaft to provide maximum torque with a relatively flat torque curve extending over the range of 1000 to 1600 rpm.

The whole set-up is designed for maximum fuel economy—since fuel is the primary item of cost. Vehicle

Below: view of Checker cab's interior.

is capable of attaining around 75 mph on the open highway.

For passenger car use the engine will be fitted with a special camshaft and dual downdraft carburetor. The standard taxicab engine also is available with a special head for compression ratio of only 5.43 to 1 when desired for low speed, low grade fuel operations.



1955 RETAIL CAR SALES BY PRICE GROUPS*

Price Group	September				Nine Months			
	1955		1954		1955		1954	
	Units†	% of Total	Units†	% of Total	Units*	% of Total	Units*	% of Total
Under \$2,000	367,163	56.45	242,493	59.78	3,010,686	55.03	2,459,797	59.70
\$2,001 to \$2,500	207,995	31.97	106,765	26.32	1,718,176	31.40	1,056,982	25.65
\$2,501 to \$3,500	59,538	9.16	40,387	9.96	589,751	10.78	439,115	10.66
Over \$3,500	15,718	2.42	15,864	3.94	152,712	2.79	164,396	3.99
Total	650,314	100.00	405,609	100.00	5,471,325	100.00	4,120,290	100.00

Price Group	September				Nine Months			
	1955		1954		1955		1954	
	Dollars	% of Total	Dollars	% of Total	Dollars	% of Total	Dollars	% of Total
Under \$2,000	\$697,435,467	49.38	\$440,965,015	51.41	\$5,716,210,962	47.59	\$4,479,672,656	51.29
\$2,001 to \$2,500	485,463,864	34.39	244,926,466	28.56	4,010,563,134	33.39	2,419,747,217	27.71
\$2,501 to \$3,500	166,391,548	11.82	110,114,128	12.84	1,665,357,469	13.87	1,199,003,864	13.73
Over \$3,500	62,422,771	4.42	61,652,545	7.19	618,090,648	5.15	635,306,850	7.27
Total	\$1,412,213,650	100.00	\$867,656,174	100.00	\$12,010,242,213	100.00	\$8,733,930,587	100.00

*—Calculated on basis of new car registrations, as reported by R. L. Polk & Co., in conjunction with advertised delivered price at factory of four door sedan or equivalent model. Does not include transportation charges or extra equipment.
†—New registrations of American made cars only. Does not include imported foreign cars.

Radiator Service . . .

Continued from Page 54

for when a customer brings a car in for a major tune-up a mechanic lifts the hood, and with the help of a flashlight shows the customer the accumulation in his radiator. When this doesn't elicit a "go ahead and clean it," the radiator man shows the customer of what a radiator core consists.

In this way the customer learns why a dirty radiator is unable to function properly and what this does to his engine. In addition, the customer is urged to stay around while his radiator is being cleaned. He will then see what comes out of it.

George Skinner claims this is the shop's best type of advertising because the customer never fails to pass along to others what he saw.

In view of this, Harry Skinner contends that to sell this type of service, words alone won't suffice. An old core is a valuable and almost necessary selling tool because a customer has to be shown what is inside the fins.

Little Rebuilding

At this shop there is not too much rebuilding. The Skinner boys don't subscribe to it. Occasionally the shop gets a "sieve to mend" that a

(Continued on page 100)

Tried the new, improved
SOL-SPEEDI-DRI?



- Your BEST BET for FLOOR PRESERVATION!
- The most DUSTLESS oil and grease absorbent you can buy!

GET A FREE SAMPLE FROM

SPEEDI-DRI CORP., Menlo Park, N.J.

HURRY UP WITH THAT KENT-MOORE
OIL FILLER FUNNEL AND TUBE BEFORE
CHADWICK FLOODS THE JOINT WITH FLUID "A"



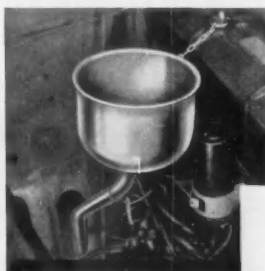
Just can't afford to be without
KENT-MOORE RATE-MAKER®
SPECIAL SERVICE TOOLS

Look through most any car manufacturer's Shop Manual and you'll readily appreciate the importance of Kent-Moore Rate-Maker Special Service Tools. They're the "J" number tools . . . shown in use from cover to cover. And in many cases you'll find they're *essential* in properly, profitably performing the jobs for which they were designed. That's because Kent-Moore Tools are developed in cooperation with major car manufacturers. Each tool is engineered to do its job quickly, easily, accurately . . . and at lower cost, too, than is possible by means of makeshift methods. So, equip your shop for extra profits . . . order Kent-Moore Tools today!

NOW AVAILABLE THROUGH SELECTED AUTOMOTIVE JOBBERS COAST-TO-COAST



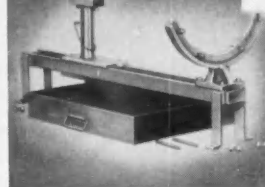
FREE! New fact-filled 12 page Manual contains complete information on entire line of Kent-Moore Tools for high-profit Hydra-Matic service. Send for your copy today!



J 4264-A Oil Filter Funnel and Tube
filters fluid, eliminates costly spillage.

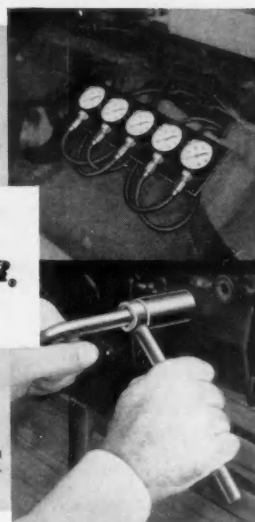
J 4872-A Powerglide Test Panel Set
improves diagnosis speed, accuracy.

Ask your local jobber
for **KENT-MOORE**
RATE-MAKER®
SPECIAL SERVICE TOOLS
for Powerglide Transmissions



J 3361-A Transmission Assembly Fixture
simplifies bench repair work.

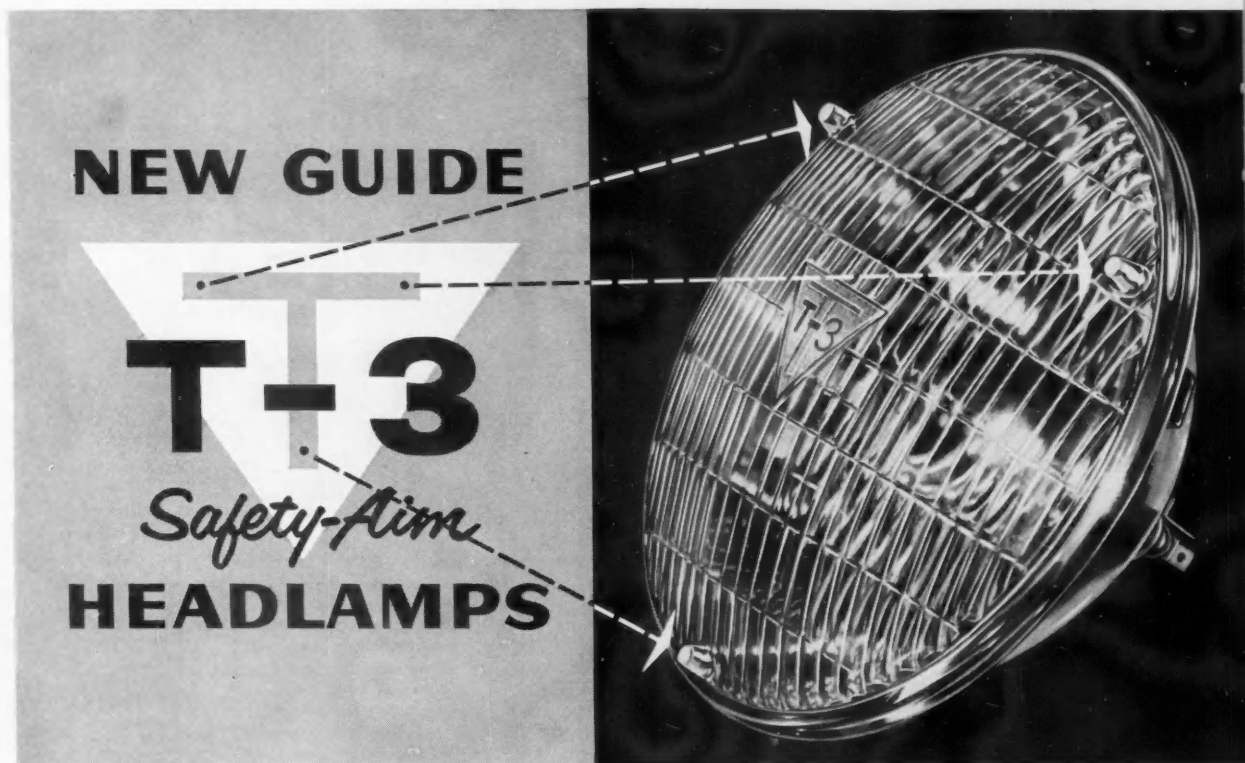
J 4277-A Servo Band Adjusting Wrench
permits precision band adjustment.



KENT-MOORE ORGANIZATION, INC. **KM**

5-105 GENERAL MOTORS BUILDING ★ DETROIT 2, MICHIGAN

This and \$15⁰⁰* puts you



GREATEST SELLING ADVANCE SINCE GUIDE
INTRODUCED THE ELECTRIC HEADLAMP IN 1908!

COMPLETELY NEW APPROACH

Here's what GUIDE'S new and exclusive T-3 Safety-Aimers do:

Guide's new T-3 Safety-Aim Headlamp—an industry-approved all-glass sealed beam unit—throws a new light pattern on the lower beam. It throws more light to the right, increasing visibility by as much as 80 feet and, at the same time, reducing headlamp glare for approaching cars. It also makes a vast improvement in bad-weather visibility by reducing light reflected by rain, snow and fog. This new Guide headlamp is the greatest contribution to night driving safety and to headlamp selling since the introduction of the sealed beam itself.

Here's how GUIDE'S new T-3 Safety-Aimers aim headlamps perfectly:

The T-3 headlamp and aimers get their name from three "Guide Points" molded right in the lens of each Guide lamp. This triangle of three alignment points permits perfect aiming of Guide T-3 Headlamps in a matter of minutes and in broad daylight, *using only a screwdriver and the new T-3 Safety-Aimers*. You don't even have to turn headlamps on! One man can do the job any time, anywhere. But, only when headlamps are perfectly aimed do your customers get all the benefits so carefully built into these new, improved Guide T-3 sealed beam units.

in a BIG NEW BUSINESS!

NEW GUIDE

T-3

Safety-Aimers



*GUIDE'S AMAZING NEW  SAFETY-AIMERS COST ONLY \$15⁰⁰ PER SET—LET YOU AIM THE NEW GUIDE  HEADLAMPS PERFECTLY—IN MINUTES—IN DAYLIGHT!

TO HEADLAMP SELLING!

Here's what GUIDE'S new Safety-Aimers mean in terms of new business for you:

First, all General Motors cars and trucks for '56 will be factory-equipped with T-3 Safety-Aim Headlamps. Second, every car on the road equipped with sealed beam headlamps is a prospect—a market of over 50 million

cars and trucks—thousands in your area alone! Get in on the ground floor of a brand-new business. Guide's T-3 Safety-Aimers cost only \$15.00 per set.

Be the first Authorized Guide Dealer in your area to profit from the new and exclusive Guide Safety-Aimers.

CALL YOUR REGULAR  SUPPLIER

OR YOUR AUTHORIZED *Guide* HEADLAMP SOURCE!

NOW! YOU CAN

Set Valve Clearance

Exactly Right!

Every Time with

P&G
Valve-Gapper



New Technique 100% Accurate

Now you can set valve clearance on most OHV gasoline and diesel truck engines uniformly and with micrometer accuracy instead of depending upon individual "feel".

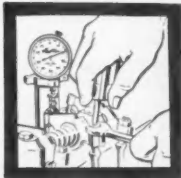
Check these VALVE-GAPPER advantages:

- Reduces Valve Adjustment time as much as 50%.
- Eliminates Inaccuracies of Individual "Feel".
- No Change in Adjustment Procedure; ONLY Method of Measurement Differs.
- Serviceman can "SEE" Clearance on Dial Indicator BEFORE, DURING and AFTER adjustment.
- Both Hands FREE to Use Adjusting Tools.
- Instantly Spot Defective Hydraulic Lifters, "See" the condition of lifters... show car owners which valves are sticking and noisy... Use the VALVE-GAPPER to free sticking lifters.
- Reduce "Service Comebacks" with the VALVE-GAPPER.

Models available to fit almost every OHV passenger car and truck gasoline engine... also models to fit GM, Cummins and other Diesel engines. Ask your jobber for the model best suited to your needs.

BOTH HANDS FREE

Serviceman always has both hands free to use adjusting tools—he can "see" exact clearance before, during and after adjustment.



Order From Your Jobber or Write

P&G MANUFACTURING CO., Dept. 12N
305 N. E. Russell Street, Portland 12, Oregon

Please send me Valve-Gapper literature and prices.

Firm Name _____

Your Name _____

Address _____

City _____ Zone _____ State _____

Engines Served:

☐ Passenger Car
☐ Gas Truck

☐ Diesel
☐ Gas Industrial

My Jobber is: _____

Radiator Service . . .

Continued from Page 97

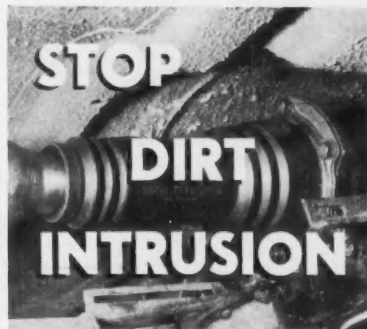
service salesman has sent in to be repaired. When one comes in it is explained to the customer why it would be a waste of money to try and repair their old radiator. Both the Skinner boys think this is a service to which their shop and dealer customers are entitled.

The shop has four line mechanics with two helpers. There is one radiator man with a young helper to remove and replace the units. With one radiator man, who works on a straight salary, the shop does 30 per cent of its dollar volume with radiator work.

Both the brothers have gone over radiator business thoroughly and they contend that radiator work is best when tied in with a regular general repair shop.

Experience has shown that fully 20 per cent of the shop's repair customers need radiator work. Consequently enough potential customers come to the shop to make a radiator department profitable, even if none come for radiator work alone.

But radiator customers invariably have some shop work to do. As a result each department helps the other from a business standpoint. George and Harry Skinner have learned that this is an ideal combination.



DAVIS BALL BOOT GIVES COMPLETE DRIVE LINE PROTECTION

- So simple, so effective that it should have been factory equipment! Davis Ball Boots for Chevrolets, Fords and GMC pick-ups end forever the problem of dirt intrusion in the drive line housing and transmission . . . offer an easy way to increase profits . . . make happy customers out of disgruntled ones.

Be the first in your area to offer drive line protection to thousands of Chevrolet, Ford and GMC owners. Write today for information on DAVIS BALL BOOTS. Made of neoprene, they're easy to install, are impervious to oil and grease, are *unconditionally guaranteed* for 50,000 miles.

THREE MODELS



Model DBB501 for Chevrolet passenger cars, Chevrolet and GMC pick-ups, 1954 and earlier. Effects a dirt and grease-proof seal around drive shaft housing and rear of transmission housing . . . positively prevents loss of lubricant from transmission, effectively stops dirt intrusion.



Model DBB601 for Ford cars and pick-ups, for all transmissions, 1949 through 1955.

Model DBB701 for Chevrolet cars and pick-ups, all transmissions, 1955 models.

DAVIS
BALL BOOT CO., INC.

2301 YALE STREET HOUSTON, TEXAS

"THE ONLY NAME IN TRANSMISSION
AND DRIVE LINE PROTECTION"

Better try the new, improved SOL-SPEEDI-DRI



- GREATER WATER RETENTION than ever before!
- The most DUSTLESS oil and grease absorbent you can buy!

GET A FREE SAMPLE FROM

SPEEDI-DRI CORP., Menlo Park, N.J.

Dream Car Continued from Page 58

full-size clay prototype. This was reproduced in plaster molds, in which the body was built up in fiber glass cloths and resins.

To strengthen the flush hood and prevent buckling, it was built up into a sandwich wall with ribbon fiber glass filler. This extra rigidity permitted stamping functional louvres (for motor cooling) the full length of the hood. The hood rests on retaining edges molded into the sidewalls. Even the lock plate is molded into the hood.

To minimize conducted vibration, the body is mounted to the frame at only seven points, all rubber-insulated. The asymmetric mounting reflects Flajole's planned use of the car as an occasional racer.

The body is built around the retractable Plexiglas canopy, which gives the effect of either an open or closed car on a single chassis. The canopy rolls back on tracks into the "fastback" shaped tail deck.

The mechanism of the retracting roof is simple, Flajole's group having adapted it from a sliding garage door. Although it slides easily by hand on its nylon bearings, it is motor-equipped to permit operation from the driver's seat.

The simple, clean line of the Plexiglas hardtop was actually one of the most difficult design problems. To work out a shape which would be appropriate as an enclosure yet have a flush fit under the tail deck contour when out of sight, required hours at the board. Detroit Macoid Co. executed the Plexiglas shape.

Bumpers are ovals of 1 inch alloy steel tubing. Because of its weight saving—10 lb. per bumper vs. up to 70 lb. on production cars—tubing offers a cost advantage over the conventional formed bumper. Additional savings are possible at the tooling up stage. Flajole's bumpers were hand formed easily from standard sizes of tubing and bracket. Functionally, the tubular ovals appear to offer greater protection against either parking "creep" or the crushing impact of a high-speed collision.

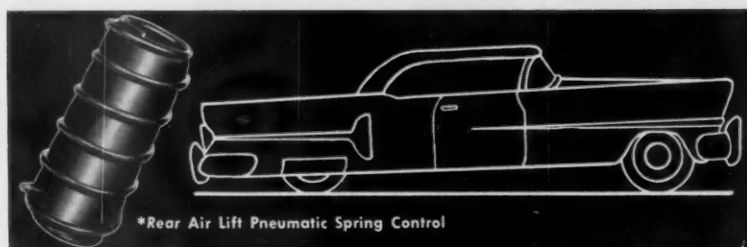
Seats are 7 in. higher than

standard, with a bolster supporting head and shoulders—along airliner easy chair lines. This design minimizes fatigue, particularly on long trips, and offers added protection against rear end and sideswipe collisions and rollovers.

Another feature is a groove around the panel cowl which permits ventilation and defrosting

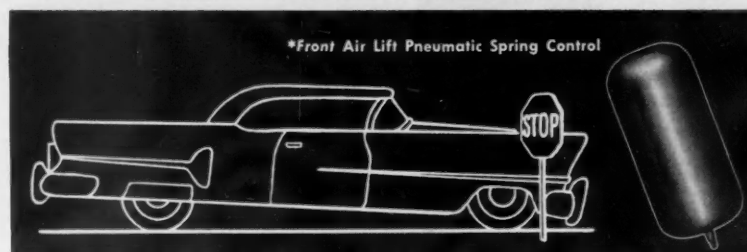
around the entire wraparound curve.

Service access problems have been solved in interesting ways. Headlights recessed behind the grille presented a potential problem in cleaning and replacing sealed-beams. A cross-bar welded to the tops of the lamps flips them over for easy access. Either front or taildeck may be lifted off for easy access to the motor or chassis by loosening just six nuts and bolts.



*Rear Air Lift Pneumatic Spring Control

TWO PRIME PROSPECTS FOR AIR LIFTS*



*Front Air Lift Pneumatic Spring Control

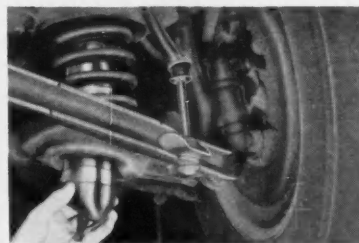
. . . fast, clean sellers with a BIG market!

Just count the cars with "sagging rears" from towing trailers or overloading! Every one is a natural for rear Air Lift Pneumatic Spring Controls . . . the *only* booster that adjusts instantly with air to compensate for the exact amount of overload up to 1000 lbs. For cars that dip on stops or sway on turns, *front* Air Lifts provide wonderful stabilizing action—also eliminate bottoming on bumps and correct front end sag.

Air Lift units are fast, clean sellers—one trained man can install a set in fifteen minutes—and the handsome profits can grow to pay your rent. Dealerships still open . . . just see your jobber or write Department 1012.



Rear AIR LIFT Pneumatic Spring Controls fit in coil springs or come equipped with own coil and fit between leaf spring and frames.



Front AIR LIFT Pneumatic Spring Controls slip inside any coil springs not loaded with shock absorbers to support spring action.

AIR LIFT COMPANY,

Lansing, Mich.



The Only Real Adjustable
Wrench Improvement
in Over 40 Years

NEW WILLIAMS LOCKING ADJUSTABLE WRENCH



WITH FEATURES YOU
HAVE ALWAYS WANTED
IN AN ADJUSTABLE WRENCH

- No Obstructions
- Structurally Sound
- Positive Lock
- Rapid Adjustment
- One Hand Operation
- No Fumbling
- Drop-Forged from Selected Alloy Steel and Chrome Plated

AVAILABLE AT NO EXTRA COST
IN THREE MOST POPULAR SIZES

No.	Size	Capacity	List Price
8L	8"	1 $\frac{1}{8}$ "	2.45
10L	10"	1 $\frac{1}{2}$ "	3.10
12L	12"	1 $\frac{3}{8}$ "	4.50

WRITE for descriptive folder No. A-465. Also ask for Catalog 402 showing the latest patterns and sizes in Williams broad line of tools.

YOU CAN ALWAYS GET THE RIGHT
WILLIAMS
AUTOMOTIVE TOOLS
FROM YOUR JOBBER!

J. H. WILLIAMS & CO.

417 Vulcan Street

Buffalo 7, N. Y.

Pop O'Neill

Continued from Page 55

elbows and pocketbooks to the elevator. . . .

"Merry Christmas, Pop!" called a voice from somewhere. "I see you are doing your shopping in a big way." The elevator of course was crowded.

Pop turned directly into a pheasant feather protruding from some other woman shopper's hat. The feather bent around the package wrappings and snapped into his left eye. " . . . These delivery boys," the feather's owner was saying in a perfectly ugly tone, and another nodded, poking her umbrella into Pop's ribs on his right side.

The rift succeeded, however, in opening up a two-inch hole. Pop could make out pretty May Blair standing north by northwest and somewhat below the package's center of gravity. "Hello, May," he returned as cheerfully as the situation would permit. And mustering all his courage and trying valiantly not to grumble, he coughed out "Merry Christmas to you." Pop at the moment was feeling not unlike Scrooge before the visits from the three Christmas Spirits.

"What in heavens is in the package, Pop? A new engine?" May asked as she led him out of the elevator and through the revolving doors to the street. With the pack-

age though, Pop couldn't see where his stop was, so he went through the revolving door several times before rejoining his pretty guide at the curb.

"A decorator's piece," Pop said gruffly. "A mobile. And a completely assembled mobile for the hall table, though how I'll get it into a gymnasium I will never know. Mrs. O'Neill's last minute thought that has to be displayed in all its splendor at some sort of pre-season preview, Sunday."

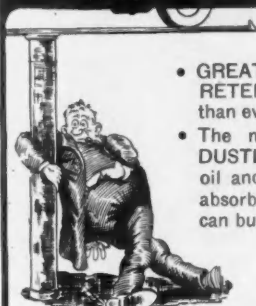
"Well, well." May had lost interest in the "thing." But she, too, had a license by virtue of her sex to interrupt the normal day's routine. "I'll drive you home. You can put that in my station wagon very nicely. And then you can see how my Ford is behaving. Will you?"

For answer Pop lowered the thing and shoved it into the open door of the station wagon. "I am in just the mood to deliver this to the first alley I come to, May, and if you will take it off my hands, I will be forever grateful. Why, I can't even get it through the street crowds to the parking lot."

"Good." May climbed into the driver's seat and hit the starter. She tried again. She turned on the key and tried once more. She turned

(Continued on page 104)

Better try the new, improved SOL-SPEEDI-DRI!



- GREATER OIL RETENTION than ever before!
- The most DUSTLESS oil and grease absorbent you can buy!

GET A FREE SAMPLE FROM

SPEEDI-DRI CORP., Menlo Park, N.J.

Classified Advertisements

FOR SALE—Wholesale and retail auto parts in fast growing unincorporated part of Los Angeles County. Established 29 years. At intersection of two busy boulevards, right in automobile row. Nationally known brands of auto parts. Complete machine shop. Approximately \$50,000.00. Selling because of eye trouble. Write Box #31 in care of MOTOR AGE.

Garage, 110x120 brick building, with living quarters and ten rental apartments. Real income from apartments plus all the repair work you want to do. Located in one of the very best towns in entire state of Idaho. Wonderful fishing, hunting and big game. Information and free pictures mailed, no obligation whatsoever on your part. This one you should investigate immediately. C-5339 Continental 804 Grand, Kansas City, Missouri.

AUTO ACCESSORY JOBBER-DISTRIBUTOR MANHATTAN. LONG ESTABLISHED. DEATH NECESSITIES SELLING. \$45,000. INCLUDES BUILDING. BOX 34, MOTOR AGE, 5601 CHESTNUT ST., PHILADELPHIA 39, PA.

"My Chevrolet Dealer is my partner in service!"



**Take it from a leading
Independent Serviceman:**

"Like all servicemen, I try to do good work because that's the way I make my customers happy and keep them coming back. My Chevrolet dealer helps me do just that by being a quick source of parts I can depend on, parts that are made right and of top quality. Believe me, he's an important part of my business."

CHARLES HENRY, OWNER
ALBERT PETER & CO.
1544 PINE STREET
SAN FRANCISCO, CALIF.

Mr. Henry receiving delivery of parts from his Chevrolet dealer.

Independent Servicemen get these **4** Big Benefits



1 A complete line of Chevrolet Parts

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4 Technical help in service problems

Booklets like the Repair Manual help you solve tough problems quickly by showing best and quickest installation methods. On tricky service problems, see your Chevrolet dealer. He can help you solve them.



**Your Chevrolet dealer is ready, willing
and able to serve you better than ever!**

Pop O'Neill Continued from Page 102

on the lights, the windshield wipers and stepped on the brake pedal, but nothing happened. Pop looked just a little hysterical, but he braced himself and waited for the grinding to stop.

"You see? That's how it's been acting ever since last month, when your boys put in some new things up front somewhere," May said.

"Only it would always start, eventually."

"Well, I don't believe it will start now," Pop grunted. "It's as dead as last month's Thanksgiving turkey. Let's take a look." He got out and lifted the hood, removed the distributor cap. The points were black as his shoes, pitted and pocked.

"Step on the starter, May," he called. The dull spark told him he would never have enough juice there to fire the plugs. "Wait a minute now." Pop took his pocket knife and scraped the corrosion from both points. It provided enough contact so that a stronger spark appeared on the next trial. "Now," he told the driver. "That should get us to the garage."

It did. And May and Pop and the "thing" were off for the O'Neill shop but first stopping enroute to deliver the package.

"What do you suppose is wrong with this Ford?" May was saying. "Your mechanics told me it was all fixed up."

"Needless to say, I'm embarrassed by all this," Pop said. "My jobs seldom come back, but this was one that I didn't get to check before it went out."

"I think they put on a new condensing unit," May said. "Anyway, it's been smoking quite badly."

"A condenser I guess. Has it been missing lately, May?"

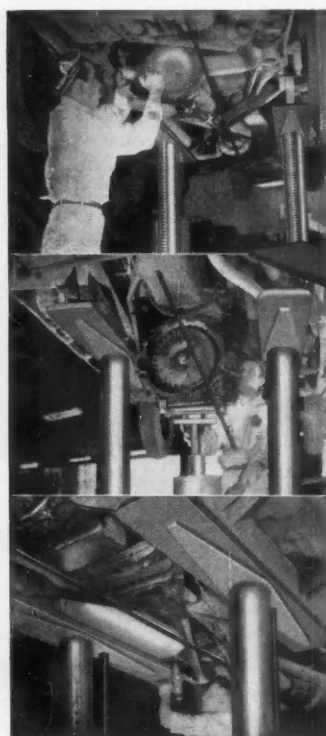
"Only when my husband takes a couple too many and forgets where he parked it," she smiled. "Would leaving it out at night corrode the points like you said?"

Pop laughed. "No, that condition is more likely to corrode the stomach. Now suppose you leave your car here and we'll bring it back tonight. We'll go over it and find out why those points aren't standing up. You can take one of our cars for the rest of the day."

May pulled up to the apron at the shop and got out. "OK. I hope you have one with a self starter. I do hate to crank them these days."

Larry, Pop's "best damned mechanic on this side of the Mississippi," offered to lend his car for the afternoon. He was playing it safe since he sensed that somehow he would become involved in the May Blair case in spite of all the good excuses he was presently thinking up. He remembered that he and Tommy had installed a new condenser and a set of points only a month ago in that Ford.

"That's right," he told Pop, who looked mighty accusingly at him as soon as May had driven off. "I checked out the condenser and the coil before I installed new points last month. We went over that



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Ford from stem to stern and *with* instruments."

"Well, I don't care about either the stem or the stern. I'm more interested in the ignition system," the old man growled. "Points just don't corrode like that for no reason. And there's no excuse for a job coming back like this when we've got all the damned instruments we need to tell us the exact condition of the ignition system."

"Well, what else could it be? Maybe the condenser was faulty. They sometimes check out OK and still don't store the voltage, you know. Why, I've found that to happen many a time."

"Yea, could be. But then again might not be. Trouble with most guys today," Pop muttered, "is that they are always trying to prove themselves right—instead of looking for cases where they might have been shortsighted or too damned haphazard."

"Now you're jumping to conclusions, Pop. You've concluded that I didn't make every check of the ignition system when I tuned up this car last month."

"I'm just cautious, son. I'm always leary of a guy who is sure of something when he hain't got all the facts. A good mechanic has to think like an engineer. He's got to *prove* his way along. And not make decisions until he's covered all the ground. That's when he can speak with something behind him besides guess."

Larry shrugged. No use arguing when you've got two strikes and a set of burned points against you.

"What could cause point deterioration besides a defective condenser or a bad coil?" Pop queried. "Ever think of that?"

"Well, excessive primary voltage could do it—but . . ."

"Did you check it?"

"No . . ."

"Then do it. I know it's doubtful that the regulator is off, but you can't come to a logical conclusion if you don't consider all the variables."

Larry hooked up the volt-ammeter and checked the current setting, voltage setting and cut-out of the regulator. "Everything's OK."

"OK. Now, what else could burn the points like that?"

"Improper adjustment, but I

know the clearance was set properly."

"How about the cam angle? Bring the analyzer over here and we'll see if the dwell is too long."

Five minutes later the report was the same. "Dwell is within limits," Larry said. "Now, what the hell else could it be?"

"Well, there's one good reason left. That's resistance in the wires, which reduces the primary voltage. Low voltage, of course, might be caused from a weak battery, but

you said you checked that first thing."

"You think it might be high resistance, huh?"

"I didn't *think*. I don't know yet. Hook up that voltmeter and we will soon *know*. All I know at this point is that high resistance caused from a poor ground, frayed wiring, poor connections or under capacity wiring will reduce the voltage to the primary side of the coil and result in low secondary voltage. This will

(Continued on page 108)

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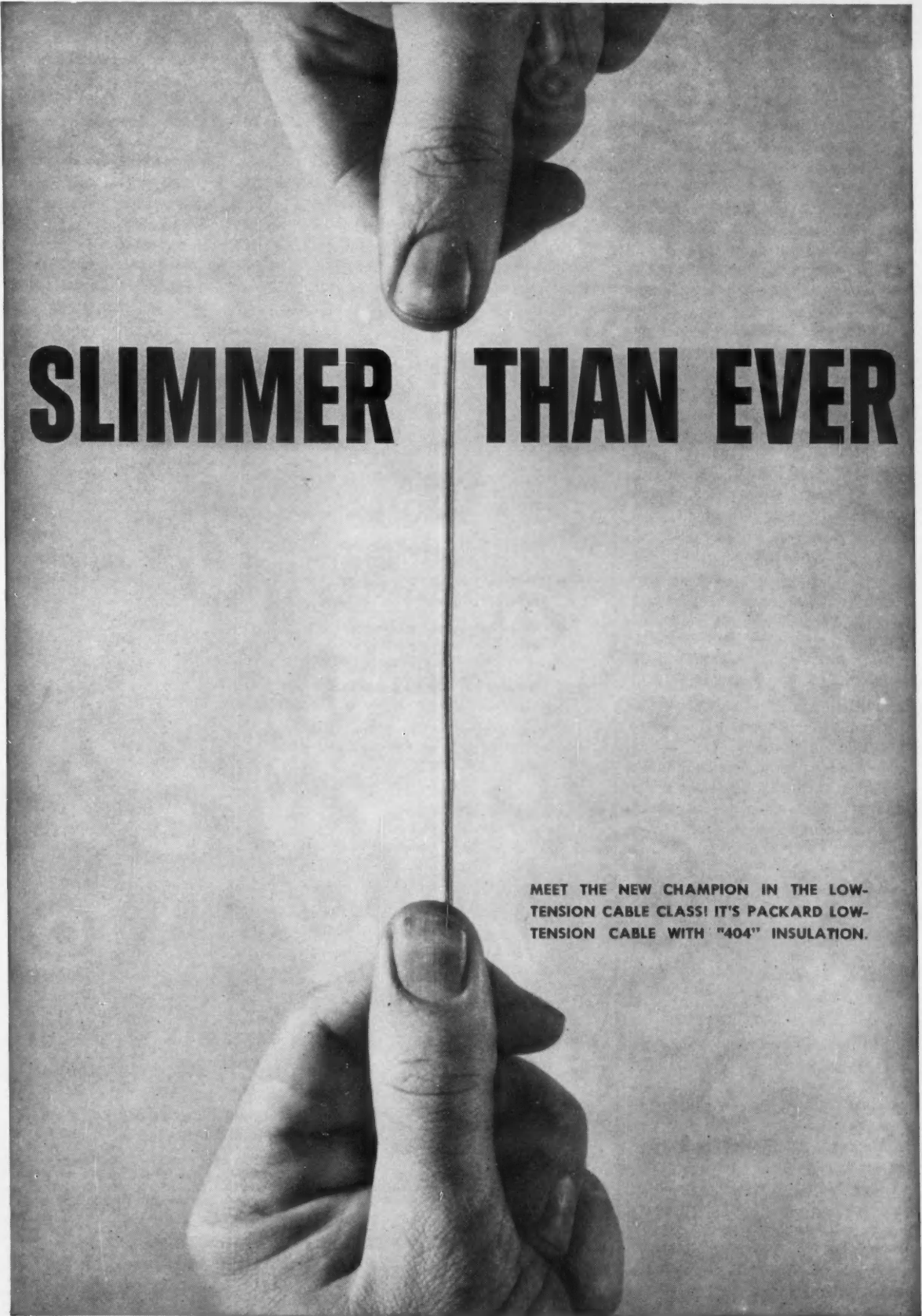
*T.M.

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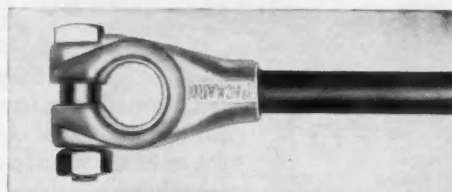
You will be adding accessory circuits to vehicles equipped with this cable. Get a stock of this Packard low-tension cable from your Packard jobber... also these other members of the "BIG 3" in the cable business, shown at the right.



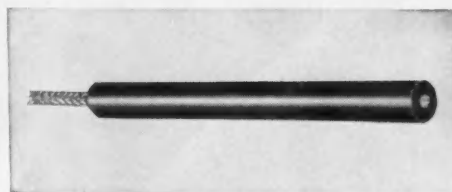
Packard Electric Division, General Motors, Warren, Ohio

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Pop O'Neill Continued from Page 105

cause the spark to burn across the points instead of flash across like it should. The heat will break down the contacts eventually in just such a way as this."

Larry scratched his head, sure that this time Pop was over his depth in theory. But he hooked in the low-reading voltmeter and checked for excessive drop in the

primary circuit from the starting motor to the ignition coil. It was .5 volt loss. Too much. Trouble somewhere.

He then checked the distributor ground connection by placing one prod of the voltmeter on the primary connection of the distributor and the other prod on the engine block. "We've got some loss, but I

haven't found it yet," he told Pop.

"Now, if you had found trouble there, what would have been the cause?" Pop asked, looking over his shoulder.

"Well, could have been a poor contact between the breaker points, or between the distributor plate and the housing, or between the distributor housing and the engine. That's pretty basic. Why, even I know that," Larry said cuttingly.

Pop laughed. "Best damned mechanic this side of the Hudson," he said, slapping the man on the back roughly.

"Now we'll check for each line separately," Larry mused, as he placed the prods between the starter post and the ammeter connection. "Whoa, here! What do we have? Found it, Pop. And," he added, feeling the nut with his index finger, "it's a loose connection. What do you know!"

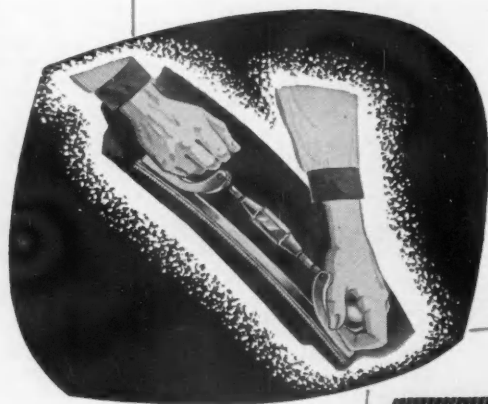
"Well, it's as simple as a loose connection at the ammeter," Pop shrugged. "For want of a turn of the nut a set of points was lost—and maybe a good customer."

Larry turned to the old man. "Sorry, Pop. You're right. I was wrong. And now if you'll promise to go way and lie down, I'll see that this sort of thing never happens again. From here on out I'm checking the job through no matter what I think is wrong. Why, I'll put an exhaust analyzer on the next car that runs out of gas!"

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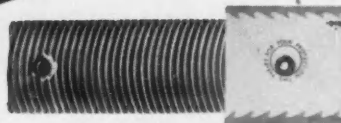
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See Page 41

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Wheel Straightening • Continued from Page 51

been incorrectly manufactured. A tolerance of about $\frac{1}{8}$ inch is allowed in the manufacture of wheels. If the play exceeds this limit the wheel cannot be properly aligned or balanced. Because of the precise work possible on its machine, at least one wheel press manufacturer advises bringing wheels to within a tolerance of $\frac{1}{32}$ inch, thus insuring top quality workmanship.

Another important point to remember is that the wheel must ride only on definite spots on the back of the bolt circle. No lug or hub hole should extend below this "riding surface" unless there is a definite provision for it on the hub plate.

Since the hub and drum must also be straight, it is advisable to check them whenever a car comes into the shop with a badly bent wheel. Hubs and drums generally can be straightened on a wheel press.

One more basic rule in wheel work is this: Before any work is done, determine how the wheel was bent. (On this principal alone, body men have a distinct advantage over other shop men. Locating the points of stress and reversing the action of a bend is the very basis of good body work.) In most cases, the wheel will have been bent inward on the car from striking curbs and so on. When in place on the press, the bend will be downward. Pressure will be applied *upward* to straighten the wheel in nine out of ten cases.

The Straightening Procedure

Because it will otherwise prevent the bolt circle from straightening, a badly bent or reversed rim must always be roughed out first. In many cases, most of the bent condition can be remedied with this process.

Note: In the press operations, a wheel will spring back some after pressure is released. Pressure must be applied until the damaged metal is slightly past "dead center," then it will return

to center when the pressure is released.

The weakest point of a wheel is the bolt circle (center). Usually it is the first to bend and will shift to one side to create an egg-shaped condition. Pushing it back into alignment is a second step in the roughing out procedure.

Attention is next turned to the straightening of pulled lug holes and hub hole. Nothing must interfere with its riding surface or the wheel will run crookedly. Pulled holes are pressed true with a tapered punch.

After the rims and all holes have been roughed out, the next step is to check the relation of the rest of the wheel to the riding surface. On one type of press this is done by securing the wheel between a base plate and a form fitting plate. In this position, the final straightening operations are performed with a jack and rim bending bars.

When doing any wheel work, avoid these dangers: Don't weld more than six inches of a rim. Don't weld any part of the center of a wheel. Don't straighten a wheel with a cracked center. Don't straighten any wheel that has been in a fire.

It adds up . . .
The new, improved
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- UNMATCHED for low, annual USE-COST!
- The most DUSTLESS oil and grease absorbent you can buy!

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Now you can repair carburetors from start to finish and waste no time hunting lost or strayed parts. Rochester's new *sealed* carburetor repair kit keeps all parts intact until they're called for on the job. What's more, a handy new moisture-proof container protects fuel strainers and matched float valve needle and seat assemblies from dirt and damage. This new kit is another important reason why you can count on Rochester to bring you the latest advancements in products and services—*first!*

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Studebaker Continued from Page 43

wagon. Horsepower here is 195.

Commander sedans and the Parkview Commander station wagon feature the most powerful engine ever offered in the Commander series—the new Sweepstakes 259-V8 at 170 horsepower. Power kits, comprised of four-barrel carburetion and dual exhaust, are available as optional

equipment and increase the 259-V8 horsepower to 185.

Champion sedans and the Pelham Champion station wagon have a newly improved Sweepstakes 185 heavy-duty economy six engine, with 101 horsepower.

The new President engine, with 289 cubic inch displacement, develops 292 lbs.-ft of torque at 2800 rpm. The new Commander engine, with 259 cubic inch displacement, develops 260 lbs.-ft of torque at 2800 rpm.

Studebaker offers a complete series of full-size 5-passenger sports models.

In addition to the Golden Hawk, the series includes the 210-horsepower Sky Hawk, the 170-horsepower Power Hawk, and the 101-horsepower Flight Hawk.

Safety Features

Heading the list of Studebaker safety innovations is a new "safety-fin brake drum which is reported to increase cooling area by more than 100 per cent, thus mini-

mizing brake "fade." The cooling feature of the new Studebaker "safety-fin" drum allows consistently quick, straight line stops in high-speed driving and mountainous terrain as well as regular driving conditions.

New crash-tested safety door latches, to prevent car doors from coming open under collision impact, are standard on all models. Crash-tested nylon seat belts are available as optional equipment. Studebaker continues to offer padded instrument panels as standard on some models and optional on the others.

A special safety device that is being continued in the 1956 lines is the "hill-holder," which prevents any roll-back of the vehicle when stopped on an incline after the foot is removed from the brake pedal. The "hill-holder" is standard equipment on all V-8 models with standard or overdrive transmission.

The fenders of the new Studebaker thrust forward over the headlamps and harmonizing wheel cutouts and lips.

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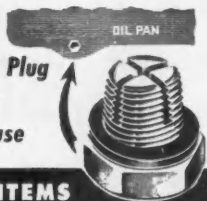
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Calendar of Coming Events

Dealers Conventions

- Jan. 28-Feb. 1, 1956—39th General National Automobile Dealers Assn. Convention, Washington, D. C.
 Feb. 26-27—Louisiana Automobile Dealers Assn., Hotel Roosevelt, New Orleans, La.
 May 26-28—South Carolina Automobile Dealers Assn., Ocean Forest Hotel, Myrtle Beach, S. C.
 Sept. 17-18—Minnesota Automobile Dealers Assn., St. Paul Hotel, St. Paul, Minn.

Automobile Shows

- Jan. 6-14—Minneapolis Auto Show, Minneapolis auditorium, Minneapolis, Minn.
 Jan. 7-15—Chicago Auto Show, International Amphitheatre, Chicago, Ill.
 Jan. 7-15—Columbus Auto Show, Veterans Memorial Bldg., Columbus, Ohio.
 Jan. 7-15—27th Annual Automobile Show, National Armory, Washington, D. C.
 Jan. 7-15—Houston Auto Show, Houston Coliseum, Houston, Texas.
 Jan. 7-15—San Francisco Auto Show, Civic Auditorium, San Francisco, Calif.
 Jan. 13-22—Seattle Auto Show, Field Artillery Armory, Seattle, Wash.
 Jan. 14-22—St. Louis Auto Show, Oakland Ave., Arena, St. Louis, Mo.
 Jan. 16-21—Grand Rapids Auto Show, Civic Auditorium, Grand Rapids, Mich.
 Jan. 21-28—Baltimore Auto Show, Fifth Regiment Armory, Baltimore, Md.
 Jan. 21-28—Pittsburgh Automobile Show, Hunt National Guard Armory, Pittsburgh.
 Jan. 21-29—Cleveland Auto Show, Cleveland, Ohio.
 Jan. 21-29—Des Moines Auto Show, Veterans Memorial Auditorium, Des Moines, Iowa.
 Jan. 25-29—San Diego Auto Show, Electric Bldg., Balboa Park, San Diego, Calif.
 Jan. 28-Feb. 4—Rochester Auto Show, Rochester War Memorial Auditorium & Exhibit Hall, Rochester, N. Y.
 Jan. 28-Feb. 5—Quad-City Autorama, Rock Island, Ill.
 Feb. 3-12—Omaha Auto Show, New Municipal Auditorium, Omaha, Neb.
 Feb. 5-12—Dallas Auto Show, Fair Park, Dallas, Tex.
 Feb. 6-11—Denver Auto Show, Coliseum, Denver, Colo.
 Feb. 11-18—Milwaukee Auto Show, Milwaukee Arena & Auditorium, Milwaukee, Wis.
 Feb. 12-19—Lansing Auto Show, Civic Center, Lansing, Mich.
 Feb. 18-26—Detroit Auto Show, Michigan State Fair Grounds, Detroit, Mich.
 Feb. 19-25—Syracuse Auto Show, Onondaga County War Memorial Building, Syracuse, N. Y.
 Feb. 25-March 3—Kansas City Auto Show, Exhibition Hall, Municipal Auditorium, Kansas City, Mo.
 March 7-11—Spokane Auto Show, Coliseum, Spokane, Wash.
 March 9-11—Kansas Motor Show, Sports Arena, Hutchinson, Kansas.

March 16-18—Wichita Auto Show, University of Wichita Field House, Wichita, Kansas.

April—Lewiston, Auto Show, Lewiston Armory, Lewiston, Me.

General

Jan. 9-13—Society of Automotive Engineers Annual Meeting, Sheraton-Cadillac and Statler Hotels, Detroit, Mich.

Feb. 6-9—Automotive Accessories Manufacturers of America Exposi-

tion, Navy Pier, Chicago.

Feb. 21-22—NSPA and MEWA National Conventions, San Francisco, Calif.

March 6-8—Society of Automotive Engineers, Passenger Car, Body and Materials Meeting, Hotel Statler, Detroit, Mich.

Apr. 6-8—Independent Garage Owners of America, annual meeting, Wichita, Kansas.

April 28-May 6—International Automobile Show, Exhibition Hall, Coliseum, New York, N. Y.

June 3-8—Society of Automotive Engineers Summer Meeting, Chalfonte-Haddon Hall, Atlantic City, N. J.



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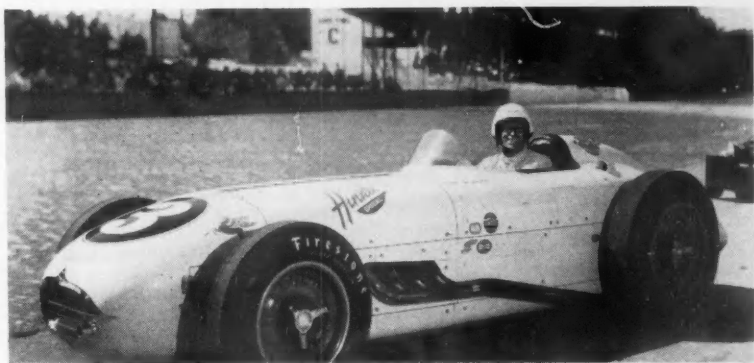
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Jack McGrath Dies As Car Flips Over

A great auto racing career came to an end Sunday, Nov. 6, when Jack McGrath was killed during the Bobby Ball Memorial race at Phoenix, Ariz.

Photograph of Jack in his Hinkle Special (top left) was taken at Indianapolis. It was there earlier this year that Jack set the one-lap record of 143.793 mph.

While negotiating a turn on the 86th lap of the 100 mile Phoenix race, McGrath's car apparently hit a rut and bounded into the air. The car flipped over several times and came to rest on top of him.

Jack, who hailed from Inglewood, Calif., was reported to have planned to retire from racing and accept a job in Los Angeles next January, with the provision that he be allowed to enter the 1956 Indianapolis race.

"What
do you want
for Christmas,
Mr. Serviceman?"



"I want **TUNGSTEN
CONTACT IGNITION!**"

Write for Catalog TUNGSTEN CONTACT MANUFACTURING CO. INC., North Bergen, N. J.

Hy-Fire V-8 Duals Now Factory Option

Plymouth has announced a new low-cost power feature on cars with Plymouth Hy-Fire V-8 engines. Dual exhaust are now available as a factory-installed option. Factory retail price at factory, Detroit, Mich., will be \$18.40.

Previously, Plymouth dual exhausts were available only as part of the full power package, which also includes a special intake manifold, a special distributor, and a four-barrel carburetor.

J. E. Wolfington

J. Eustace Wolfington, Philadelphia automobile dealer, died Nov. 25. Mr. Wolfington was well known in the industry for his enthusiasm and support of dealer trade associations at local, state, and national levels.

He was past president of the Phila. Automobile Trade Association, the Pa. Automotive Association, and a former vice president of the National Automobile Dealers Association.

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RIVETING TOOL**

- COMPACT
- PRACTICAL
- SIMPLE TO OPERATE
- PRODUCES A ROLLED RIVET

For removing and setting rivets in Lower Vent Pivots and Vent Handle Brackets on all popular model cars. May also be used on some Division Bars. Replacement of Vent Handle Brackets may be done without removing Vent from car. Precision made of hardened tool steel \$7.40

Complete assembly with Rivet Remover Screw (A) and Regular Rivet Setting Screw (B). (Large Rivet Screw (C), for larger head rivets, \$2.40 additional).

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EVERLASTING ... the first tools made over 25 years ago are still in service.



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STEAM ROOM
PRIVILEGES
EXTENDED TO GUESTS**

**SUIT AND TOWEL
SUPPLIED**

GARAGE FACILITIES

LEXINGTON AVENUE AT 49th STREET

AAA APPROVED

Electrolyte
MEETS ALL BATTERY
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Recommended by Leading Battery Manufacturers

LEAKPROOF!

12 Disposable
1 Qt. Glass Bottles
Packed in Reinforced
I. C. C. Approved Carton

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Here's a Carburetor Cleaner with
NO LINGERING STINK!

GRAYMILLS
606
FORMULA

Graymills
606 formula
cleans faster
and lasts up to
6 times LONGER
... with no skin burn
... no lingering "stink"

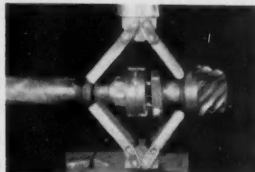
GET IT FROM YOUR JOBBER TODAY.
MONEY BACK GUARANTEE!

65

GRAYMILLS CORPORATION
3757 N. Lincoln Ave., Chicago 13, Illinois



BB PINION GEAR SPLINE ASSEMBLY
RAPID
R-E-M-O-V-E-R
FOR CHEVROLET AND BUICK



Save Time Save Work Save Money **\$1945** PREPAID IN U.S.A.
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BEAULOYE BROS. ENGR. CO., 1344 BROADWAY, SAN DIEGO 2, CALIF. DEPT. A

AUSCO
Jacks
DISC BRAKES
MALLEABLE IRON AND
STEEL CASTINGS
MECHANICAL & HYDRAULIC

AUTO SPECIALTIES MFG. CO.

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MOTOR AGE



The Quality Magazine
of the Automotive

After-Market

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Highly Recommended



Manufacturers of automobiles, trucks and farm machinery have made Rimac Valve and Clutch Spring Testers standard plant equipment—recommend them for service and overhaul operations.

Etched metal scale at sides indicates exact length of spring; adjustable stop allows quick testing of an entire lot. Suitable for springs up to 2 inches diameter, 4½ inches length—capacity 0-250 lbs.

Ask your jobber or write for literature.

RINCK-McILWAINE
INC.

16 HUDSON STREET, NEW YORK 13, N. Y.

Mr. NUTS 'N BOLTS says...



Get a firmer grip on your work
with **GRIPSO**
Special feature **TOOLS**

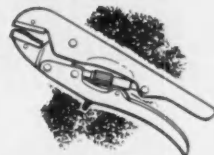
Multi-Duty PLIERS

Amazing new 3-piece design multiplies hand power 10 times. 4 position parallel jaws give non-slip grip on nuts, bolts, anything—in hard to reach places.



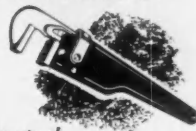
Trigger-Matic VISE PLIERS

Sheer mechanical magic! Locks on with 1 ton grip, releases instantly, gently with touch of the finger. Five tools in one. Designed to do more work easier and faster for the home craftsman.



Gripso-Matic PIPE WRENCH

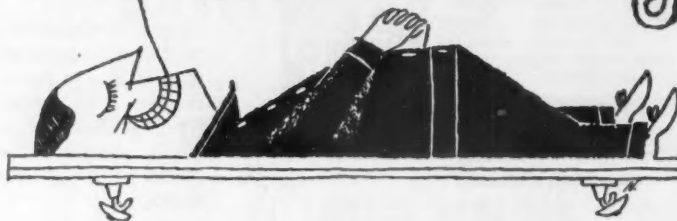
A flick of the wrist, a tap of the hand—pipe turns instantly, perfectly. Streamlined—lightweight, works twice as fast as other pipe wrenches. A brute for strength.



All tools guaranteed

See your dealer or write **H. R. BASFORD CO.**
Dept. M-12, 235-15th St., San Francisco, Calif.

The Last Laugh



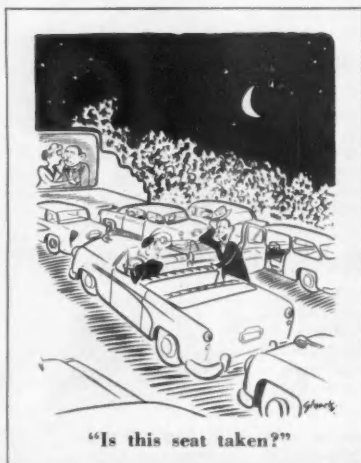
An electrical shop received a phone call from a prominent resident stating that the door bell was out of order and asked that a man be sent out to repair it. The superintendent sent one of his workmen out and supposed the proper repairs had been made.

The house owner called at the shop the following day and wanted to know why the bell had not been fixed. The superintendent questioned the man assigned to the job and the fellow replied: "I went out there yesterday and pushed and pushed the button. There was no answer, so I thought nobody was home."

"What is your husband doing for his health?"

"Well, the doctor prescribed a shot of whiskey and two aspirins every four hours. Right now he's ten weeks behind on the aspirin and two years ahead on the whiskey."

Punctuate this one to fit the case: "Woman, without her man, is helpless," "Woman, without her, man is helpless."



Two characters had been drinking merrily for some time when one lost his grip on the bar and fell face down on the floor.

"That's what I like about slim," his companion remarked. "He's dependable—always knows when to stop."

As the funeral procession passed the 16th green, one of the foursome doffed his cap and stood at silent attention.

"That was a nice gesture," said his partner.

"Yes," the man replied. "She was a wonderful woman. Next month we'd have been married 35 years."

Christmas comes with snow and ice,
With mistletoe and all that's nice;
But gosh, it almost gives me chills
To think it also comes with bills.

Wife: So you saw Mabel downtown this afternoon? What kind of hat was she wearing?

Husband: Don't know. Didn't notice. Too windy.

An old farmer was telling his neighbor about seeing his first movie.

"Yep, 'twas good," he said, "but there was one scene where a bunch of girls started to undress to go swimming. Then a train would zoom by, and the next thing the girls would be in the water. I sat through four shows waitin' for that dumb train to show up late."

Fed up with the fancy descriptions he had to set in type day after day, a printer added this on his own to the end of one wedding story: "The linotype operator, while he set this, wore a pale blue shirt with pants to match and a silver wrist watch on his left wrist."

Lil: I hate my boss

Til: Why?

Lil: He whistles such dirty songs.





Engineering Leadership in EVERY SET

**Assures You of Doing Every
Job Right Every Time**



for Today's Re-Ring Jobs



for Fleet and Engine Rebuild



HEAVY-DUTY RTC SETS



for the New Engines

duomatic C SETS



For more profit-making jobs, ask your Ramco Jobber for the Ramco Ring Line Selector Guide illustrated at the left. This guide brings you the complete Big 4 Ramco Ring Line-Up for doing the job right.

Use it to show customers how, with Ramco rings, they are getting years-ahead piston ring performance,

whether they are driving a 1940 car, a truck or a sleek 1954 or 1955 engine job.

It's easy for the car owner to see the difference, because no other rings even look like Ramco! Whether it is 10-Up with No Gap Spiro-Seal or C-9 with Duomatic Action, *you've got years-ahead piston ring design with RAMCO!*

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PISTON RINGS

10 up

for today's Re-Ring Jobs

RTC

for Fleet and Engine Rebuild Jobs

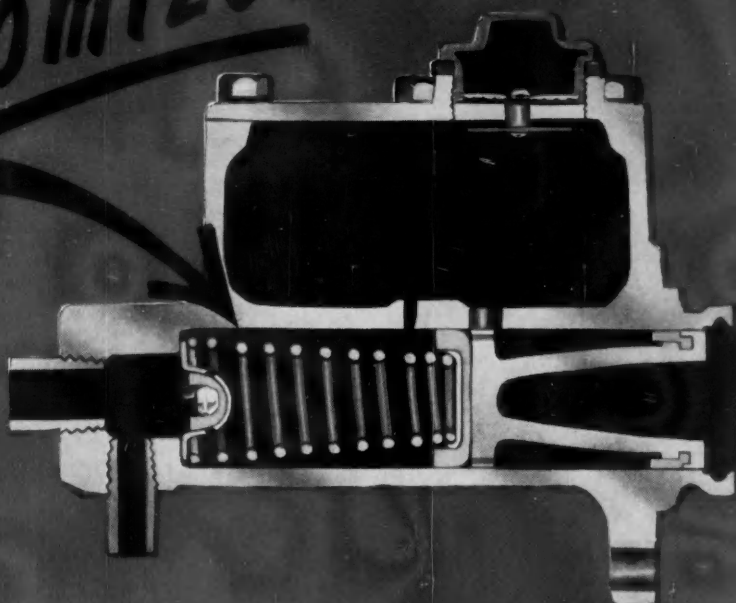
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for the New Type Engine Ring Jobs

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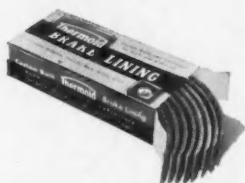
smooth... but not too smooth!

Micromized



master and wheel cylinder walls

Brake cylinder walls that are *too* smooth can't retain the thin film of oil needed for proper lubrication. Getting the right finish on these wall surfaces is an extremely exacting process. That's why Thermoid Master Cylinder Walls are *Micromized*. Never too rough... never too smooth, they're *precision finished* for positive braking action and maximum cylinder life. Insist on genuine Thermoid Hydraulic Brake Cylinder Assemblies, Repair Kits and Parts.



Thermoid Custom Built Brake Lining and Hydraulic Fluid

Thermoid

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the standard of precision processing in
brake lining, brake blocks, hydraulic fluid,
cylinder assemblies, hydraulic brake parts